ORIGINS

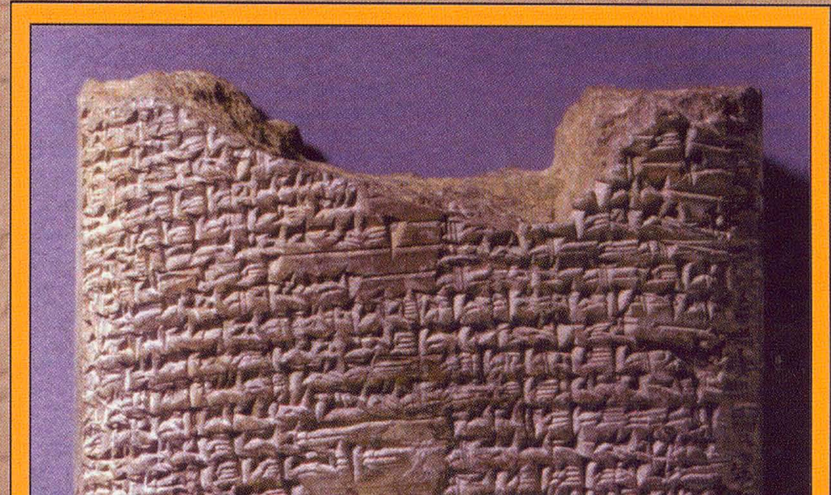
The Journal of The Biblical Creation Society

No.30

December 2000

Snake Retake

7th European Creationist Congress



Divine Design

The Evolution of Charles Darwin

Creation/Evolution – Where's the Problem?

£3.00

Editorial

Don't bank on Darwin

The Bank of England has chosen Charles Darwin, father of the theory of evolution, to be the new face on the £10 note. Portraits on bank notes celebrate those who have made an outstanding contribution to British history and controversial figures are not usually given this honour. Expert Barnaby Faull of Spink & Son Ltd. said, 'Bank notes are an advertisement for a country. Banks try to choose someone who's apolitical and not likely to upset anyone'. However, the spiritual life of our country is at such a low ebb that few people are likely to object to Darwin. On the contrary, Vanessa Crowe of the Bank of England was reported as saying, 'Lots of people wrote to us suggesting we include Darwin on a note'.

As we look at our nation we see its moral fabric falling apart and lawlessness increasing. The biblical concept of family life and marriage is under attack, leading to terrible consequences for all in society, not least our children. Homosexuality is flaunted and men and women are confused about their roles. Abortion is widespread, with legalised euthanasia just around the corner. The Archbishop of Canterbury made headlines recently when he described the U.K. as a nation of atheists. We in the BCS believe that acceptance of Darwin's theory is one of the prime causes of this spiritual melt-down. Darwinism has led people to reject the Creator, with tragic results. To its shame, the church has not been steadfast in opposing the root causes of this situation. Instead of rejecting Darwinism as unbiblical, many Christians have re-interpreted the Scriptures to accommodate it. They tell us that evolution is simply God's means of creating all things, even though the 'survival of the fittest' seems contrary to His revealed nature. They tell us that the Bible is about 'how to go to heaven, not how the heavens go', even though such platitudes do not begin to show how evolution can be reconciled with the Genesis account. Such compromise has had a long history. Darwin, whose writings did so much to undermine Christianity in this land, was honoured by the church by being buried in the foundations of Westminster Abbey. Today we commemorate him by placing his image on the money in our pockets—fitting for the materialistic nation which we have become.

The work of the BCS has never been more vital. Many thousands of people in our nation have turned their back on the Creator, because they believe they are just a cosmic accident. They are taught that they are nothing more than 'naked apes', and that life has no ultimate meaning. They are told that they are biological machines whose only purpose is to pass on their genes to the next generation. No wonder so many are in despair today. A recent survey of 400 British men and women shows that a quarter of them fear a 'hopeless future', one in three feels 'downright miserable', and one in 10 thinks they would be better off dead. No wonder the philosophy of many young people is 'Eat, drink, and be merry, for tomorrow we die'. No wonder the suicide rate in the West is so high. In the face of this, it is increasingly urgent that we proclaim the truth that we are not 'naked apes' or mere 'gene machines'. Rather, we are the handiwork of the Creator, made in the image of God and of immense value to Him. More than anything else we need to be reconciled to our Creator and that is possible through His death on the cross at Calvary. This is the message of life and hope for which the BCS stands. If you want to understand the true meaning of life, the universe, and everything, bank on the Creator—but don't bank on Darwin!

In this issue...

This edition of *Origins* is something of a transitional form! In response to feedback from our readers, future issues will include more popular-level articles. We will still be publishing original papers dealing with technical issues, but we are also aware that many of our supporters find these articles hard work. Jeff Lowe makes this very point in the opening paragraphs of his Reader's Viewpoint article. Our aim is that future output will be more balanced, so that more of our readers can benefit from our magazine. With this issue, we are taking our first tentative steps toward that goal.

Our expanded contents page sets out our stall for this issue. We break new ground with our interview with Dr. Stuart Burgess, author of *Hallmarks of Design*. We hope to make interviews of this sort a regular feature, and welcome suggestions for future subjects. If you have any comments on this, or on any of our other articles, why not put pen to paper and write to us? We look forward to lively letters pages in coming issues. Finally, I must mention the drawing of Adam and Eve working in Eden on our back cover. This delightful picture was sent to us by 8-year-old Jemma Roberts of St Albans, Herts., after we published Mike Matthews' article on creation and work in *Origins* 25. Many thanks to Jemma!

Paul Garner

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ORIGINS
• Journal of the Biblical Creation Society •

No. 30 **December 2000**

Editorial

Don't bank on Darwin! Paul Garner muses on the recent issue of the new £10 note and what it says about the spiritual state of the nation.

Hallmarks of Design

Interview with Dr. Stuart Burgess, university lecturer and author of a new book on design in the natural world. Dr. Burgess explains how the universe reveals the Creator's invisible attributes of power, wisdom, and fatherly love. 2

Book Review

Paul Garner finds *Refuting Evolution* by Jonathan Sarfati a useful primer on the latest evolutionary arguments and counter-arguments. 4

Conference Report

In August over 100 delegates gathered at the 7th European Creationist Congress in Portsmouth. Dr. Marc Surtees was there and reports on the event for us. 5

BCS receives Warm Commendation from Henry Morris

Correspondence from Dr. Henry Morris, prolific author on creation-evolution and Christian apologetics, and President Emeritus of the Institute for Creation Research, U.S.A. 9

Snake Evolution and the Garden of Eden

In this intriguing article, Steven Robinson probes the boundaries and limits of variation within the created Genesis kinds. He suggests that all living and fossil snakes constitute a single basic type. Within the kind there has been much variation, but there is no fossil evidence connecting the snake kind with any other basic type. 10

Observations on the Creation/Evolution Debate

The writings of non-Christian scholars suggest that neo-Darwinism is a hypothesis lacking a substantive scientific basis and even that the length of recorded human history provided by the Bible is of the right order. Why then do we have a problem getting the 'creationist' position accepted by the Church, let alone the media and the average man and woman 'in the street'? In our *Reader's Viewpoint*, Jeff Lowe offers an intriguing analysis. 14

The Ambitions, Beliefs and Concepts of Charles Darwin

Charles Darwin set in motion a revolution that has had pernicious effects throughout society and in every field of human thought. In the first instalment of a two part article, Dr. Leonard Loose provides some fascinating insights into the formative influences on the young naturalist. 21

COVER PICTURE

Clay tablet recording the Babylonian creation myth *(see page 14)*

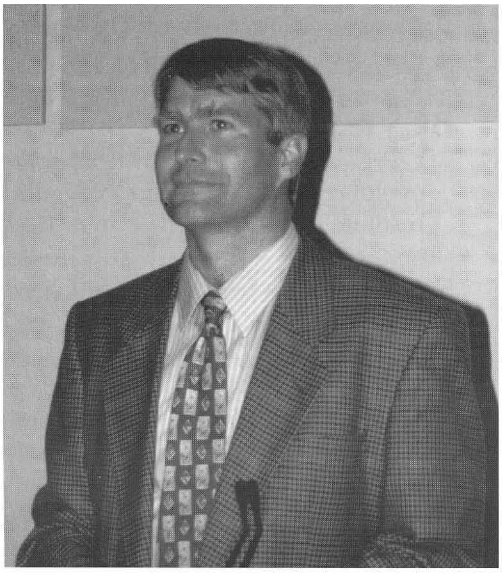
Hallmarks of Design:

An Interview with Dr. Stuart Burgess

DR. STUART BURGESS is a lecturer in Engineering Design at Bristol University. He has also lectured in Engineering Design at Cambridge University where he was a Bye-Fellow of Selwyn College. He has published over 50 papers on the science of engineering design. He is a member of Buckingham Chapel in Bristol and has a Diploma in Theology from the London Reformed Baptist Seminary. He is married to Jocelyn and they have five children.

Q: Dr. Burgess, what does your research in Engineering Design involve?

My research is in the area of design optimisation of mechanical parts like beams and roller chains. I try to identify the geometry and materials that will produce the best performance in a mechanical component. I am also studying optimum design solutions in nature to see how they can be applied in engineering.



Q: I believe that some of your work has appeared in *New Scientist* and on BBC Radio 4's *Science Now* programme?

In 1998 I published some papers on the optimum design of chains and sprockets. This work caused quite a stir in the sporting world because the improved designs meant that there was now a greater possibility that some of the cycling world records could be broken. I was interviewed about the work in *New Scientist* and the *Science Now* programme. After this work my colleagues joked that they did not know whether to call me a rocket scientist or a sprocket scientist!

Q: And you've also won an award for engineering design?

In 1992 I invented a new type of gearbox called a 'double action worm gear set' for the deployment of solar array panels on satellites in space. The mechanism was awarded the Turners Gold Medal which is awarded about once every four years in the U.K. for advances in engineering design.

Q: Before you joined academia, you spent several years in industry designing spacecraft systems for the European Space Agency. Can you tell us more about that?

The design of rockets and spacecraft is the ultimate challenge for an engineering designer. Spacecraft contain some of the most sophisticated and reliable machines made by man and they have to work in very hostile environments. One of the things I learnt in the space industry is that complex machines do not get created by chance. Rather, they require creative ideas, attention to detail and extremely careful planning.

Q: You have extensive experience in engineering design. How has that influenced your approach to evolution?

I can see many mechanical mechanisms in nature that engineers use in engineering. Engineers design these mechanisms from the top-down, *i.e.* they start with a fully functioning concept and then refine the details. In fact, engineering students are taught that design is always a top-down process. In contrast, the theory of evolution is a bottom-up process that starts with details and supposedly ends up with a fully functioning concept. I am keen to tell evolutionists that mechanisms cannot be designed from the bottom-up!

Q: You recently wrote *Hallmarks of Design: Evidence of Design in the Natural World* (Day One Publications, 2000). Can you explain to us the basic case you are putting forward in the book?

The theory of evolution is very limited by step-by-step change and bottom-up design. In contrast, an intelligent designer has no such limitations and can produce extreme levels of order and beauty. In my book I present six hallmarks of design that cannot be produced by evolution: irreducible mechanisms; complete optimum design; added beauty; extreme similarity; extreme diversity; and man-centered features. I give examples of complexity and beauty in many areas including the human body, bird flight, bird song, bird colouring, trees, flowers and the earth ecosystem. The book is meant to both challenge the evolutionist and encourage the believer. All through the book I discuss how creation reveals God's attributes and how this is an encouragement to Christians.

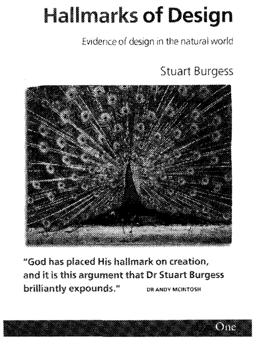
Q: Many evolutionary biologists consider that they have a perfectly adequate mechanism for the generation of apparently designed structures (neo-Darwinism). How does an engineer handle this situation?

Evolutionists claim that they have an adequate mechanism but when you read biology books there are no examples of how basic mechanisms can evolve. Evolutionists like Richard Dawkins have to resort to analogies like the evolution of letters when they want to explain how a mechanism has supposedly evolved. I would like evolutionists to explain in detail how a mechanism like the knee joint could have evolved. The knee joint is what engineers call a four-bar mechanism and it requires four parts to be simultaneously present and correctly assembled. There is no evidence of intermediate knee joints in the fossil record. In fact, evolutionists cannot even construct hypothetical intermediate mechanisms for the knee joint.

Q: In response to your article on the knee joint in *Evangelicals Now* a correspondent claimed that creationists were wrong to focus on specific evidences of design like the knee. How do you answer that?
Scripture encourages us to be selective in our examples. In Chapters 38–41 of the book of Job, God selects particularly striking examples of design from creation such as the hawk's wings, the horse's neck and the flight of the eagle. By selecting particular examples of intricate design in nature, like the knee joint, creationists are following biblical teaching. Focusing attention on basic mechanisms in nature is the most effective way of showing how evolution is a shallow and false theory. The evolutionist tries to focus on trivial examples of change like the change in colour of a moth. Evolutionists focus on relatively peripheral components like the knee-cap, cartilage and synovial fluid which are not all absolutely essential to the basic functioning of the knee. Whilst I believe that the whole knee has been wonderfully designed, the fact remains that it is the basic four-bar mechanism of the knee which most clearly demonstrates that evolution cannot work.

Q: How have your academic colleagues received your book?
I have been surprised by the amount of sympathy for the arguments but there has been some hostility. I have no doubt that the reaction would have been more hostile if I was in a biology department.

Q: How does your approach to design in nature compare with the proponents of 'intelligent design theory' such as Michael Behe and William Dembski?
In the case of Behe and Dembski, they only present evidence for an intelligent designer. However, this does not necessarily lead a person to the God of the Bible since there are lots of religions that believe in a Creator. In my book I try to base my design argument on biblical foundations. In particular, my book expounds Romans 1:20. This means that, as well as presenting evidence for design, I also discuss how nature reveals God's invisible attributes of power, wisdom and fatherly love. In addition, I devote the last chapter of the book to a presentation of the message of the cross. I believe that after telling people that they have no excuse to reject God, then we need to tell them how they can be reconciled to God. In addition, my book gives a lot of attention to beauty in nature which is an area not covered much before.


Hallmarks of Design
Evidence of design in the natural world
Stuart Burgess
"God has placed His hallmark on creation, and it is this argument that Dr Stuart Burgess brilliantly expounds." DR ANDY MCINTOSH
One

Q: I understand that the Prince of Wales quoted your book in his Reith lecture earlier this year. Is that correct? Do you know how that came about?
A friend of ours had the idea of sending Prince Charles a copy of the book. To our surprise, Prince Charles wrote to us asking for our permission to quote from it in his Reith lecture. He actually quoted from the following passage from the foreword: 'Sir Julian Huxley in *Creation: a modern synthesis* wrote, "Modern science must rule out special creation or divine guidance". But why? The theory of evolution is a man-made theory to explain the origin and continuation of life on this planet without reference to a Creator'. This quote caused quite a stir in the academic world and it was reported in the *Times* newspaper.

Q: In August you attended the 7th European Creationist Congress, held at Portsmouth University and gave a much-appreciated lecture on design. Was this the first creationist conference that you've been to? What were your impressions of the event?
Yes, it was my first creationist conference. It was fascinating to hear talks on such a wide range of subjects and it was good to meet like-minded Christians. The secular conferences that I will attend in future on the design of structures and machine elements will now seem boring in comparison!

Q: In your lecture, you gave some lovely illustrations of complexity and design that defy Darwinian explanations. The one that particularly stuck in my mind was the 'eye' on the peacock tail. Can you tell us about that?
The tail feathers of the peacock exist for decorative purposes. Evolutionists claim they have evolved by sexual selection but this theory contradicts the principle of the survival of the fittest because the tail feathers make the peacock conspicuous and hinders its manœuvrability. Another problem with sexual selection is that the eyes on the tail feathers are produced by extremely complex mechanisms and these must be specified by huge amounts of precise information in the DNA. A feather consists of a main stem with an array of barbs on each side. Each barb contains many tiny barbules that link the barbs together. On most birds, the barbules are simple hooks. However, on the tail feathers of the peacock, the barbules are large plate-like structures that overlap to produce a smooth silky surface. Also, the barbules produce colour by the interference of light. The actual barbules on the peacock have virtually no pigment type colour. However, because the barbules have sub-micron layers of keratin, they produce iridescent colour in the same way as a soap bubble or oil slick. However, unlike a soap bubble, the colours on the peacock are precisely co-ordinated!

Q: What about your testimony? How did you become a Christian?
In the first year of my university course, a Christian friend challenged me about my belief in evolution. This instantly made me want to hear more about the Christian message in the local evangelical church! Within a few months I was converted and amazed at the way the Bible answered the ultimate questions of life.

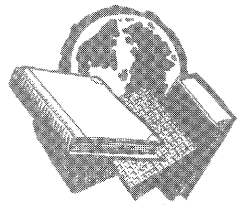
Q: Why is creation an important message in today's culture? With our limited resources shouldn't we just concentrate on the gospel?

I agree with anyone who says we should concentrate on the Gospel. But the Gospel has no foundation if we do not tell people that there is a Creator to whom we are all accountable. The Apostle Paul was himself a creationist! The book of Acts records how Paul talked about the Creator and the creation during his evangelistic preaching. There are many people in our day who are on a path to hell thinking that the theory of evolution gives them an excuse not to believe in God. Therefore, creationists are doing a vital job when they defend the book of Genesis and show how creation reveals a Creator.

Q: How do you see the role of the creationist movement developing in the U.K.? Where should we be concentrating our efforts?

I think that there will always be an urgent need to get the creation message into our churches. Our land needs preachers who fear God and not man and who are not afraid to preach faithfully from Genesis 1 and Romans 1. It also needs teachers in theological seminaries who understand that Genesis was written by a God of infinite wisdom and therefore can be trusted, whereas evolution is the product of atheistic philosophy and therefore cannot be trusted. But we must never forget that prayer is our most powerful weapon.

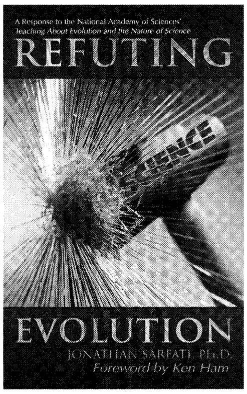
Review



Refuting Evolution, by Jonathan Sarfati. Master Books, Arizona. 1999. 144 pp. ISBN 0–89051–258–2.

Reviewed by Paul Garner

In mid–1999 the ten-member Kansas Board of Education voted to omit particles-to-people evolution from school assessment tests. The teaching of evolutionary theory had not been banned in the state, neither had the teaching of creationist theory been mandated. Nevertheless, the fall-out from the decision was extraordinary. Apocalyptic statements from various members of the evolutionary establishment predicted the collapse of the Kansas economy, while others felt that it heralded the end of free thought in the state. Some commentators called it a 'medieval' decision that set Kansas back 100 years and made it a laughing stock in an age of enlightenment. Whatever one makes of the Board of Education decision, it is obvious from the subsequent furore that the creation-evolution controversy is a live political issue in the U.S.A. in a way that it is not in the U.K.. It was into this *mêlée* that Dr. Jonathan Sarfati's book was propelled. To capitalise on the media coverage of the Kansas decision, *Answers in Genesis* placed a quarter page advertisement for *Refuting Evolution* in the newspaper *U.S.A. Today*. The result was that tens of thousands of copies were distributed.


A Response to the National Academy of Sciences' Teaching About Evolution and the Nature of Science
REFUTING
SCIENCE
EVOLUTION
JONATHAN SARFATI, Ph.D.
Foreword by Ken Ham

Strictly speaking, *Refuting Evolution* is a response to a publication of the American National Academy of Sciences (NAS) entitled *Teaching About Evolution and the Nature of Science*. During 1998 the Academy had distributed this document to state schools and other institutions to persuade teachers to present evolution as a fact of science and to provide them with ammunition against creationist students. The NAS document is, in fact, a self-contradictory effort claiming that creationist ideas are scientifically untestable, while simultaneously subjecting them to test! Dr. Sarfati scrutinises the NAS document and exposes its naturalistic bias and its selective and misleading presentation of the scientific evidence. His analysis will be particularly useful to creationist students, parents, and teachers in the U.S.A. who are concerned to counter the NAS's evolutionary propaganda.

However, it is likely to be of wider value. *Teaching About Evolution* is an up-to-date presentation of what the prestigious National Academy of Sciences believes is the overwhelming evidence in favour of evolutionary theory. *Refuting Evolution* is, therefore, a handy critique of the latest pro-evolutionary arguments. It deals with examples of 'evolution in action', such as the development of antibiotic resistance in bacteria, the Galápagos finches, and dog breeding, and shows that such changes are qualitatively different from those required for particles-to-people evolution. Sarfati reviews the fossil finds that are said to prove that dinosaurs evolved into birds and hoofed land mammals into whales. The basis for these transitions is far less solid than the NAS presentation suggests. There are also brief chapters examining aspects of human origins, the big bang, the age of the earth, and the scientific legitimacy of the design explanation for living things. Sarfati concludes that the only reason for excluding the concept of intelligent design from scientific discussions of, or teaching about, origins is an *a priori* commitment to philosophical materialism. As a popular-level primer on the latest evolutionary arguments and counter-arguments, *Refuting Evolution* is a useful contribution.

The Seventh European Creationist Congress

AT PORTSMOUTH there were lectures, discussion, constructive debate and sometimes we agreed to differ! Most of all there was opportunity for fellowship and encouragement in the Lord's work in this most vital area of creation. Dr. Marc Surtees has provided us with a summary of what the speakers said in their lectures so that those not able to be present can read about the main issues raised. Some topics were new, some familiar but worth hearing again, some controversial and they challenged us to think issues through.

The Seventh European Creationist Congress (7th ECC), sponsored by the Creation Science Movement, was held at Portsmouth University from the 21st to the 25th August 2000. It drew over 100 delegates from France, Germany, Holland, Norway, Sweden, U.S.A., Zimbabwe, Romania and the U.K. Fifteen speakers from five countries presented papers on various aspects of creationism. Presentations were made in a well-equipped lecture theatre using modern audio-visual projection facilities.

Dr. David Rosevear (U.K.) commenced proceedings with an overview of the problems with a mechanistic explanation for the origin of life in a paper entitled *Could life have arisen spontaneously?* We were reminded of the inadequacies of Miller's foundational experiments with a supposed early earth atmosphere that only produced a tar-like racemic mixture of a few amino acids and other organic molecules. The problem of chirality, *i.e.* that proteins are made up of left-handed isomers of amino acids and DNA right-handed isomers of sugars and bases, cannot be explained away. The talk concluded with a description of the design features of the enzyme ATP synthase.

Tuesday started with a survey of *The intricacies of flight in some flying creatures*, by **Professor Andy McIntosh** (U.K.). In his introduction we were reminded of the centrality of Scripture in all our thinking as creationists. Design in creation confronts us with the wisdom of God who created everything out of nothing, by His spoken word (Psalm 148:5). Therefore, the created order would be expected to show God's power and we should find design, purpose, detail and precision. His talk was illustrated with examples of three types of flying creatures: birds, insects and bats. The fact that birds have been designed to fly was demonstrated by looking at their air-filled bones, the one-way respiratory system (unique to birds) and the design of feathers (interlocking barbs that are continuously maintained by preening and application of oil to ensure that the sliding joints function correctly). Winglets found on some species, such as the owl, show advanced design features that have only recently been recognised by human engineers. Butterflies and other insects have been equipped with different design features as shown by the 'clap and fling' mechanism that increases lift. Dragonflies generate lift by using their wings as rotors and have a finely tuned mechanism for timing rotation of the wings for modifying the amount of lift.

Mr. Francis Pym (U.K.) presented his paper on *The two fluid theory: physical implications of a background medium in space.* He argued that relativity theory is not the only response to failure of the Michelson-Morley experiment to detect the 'ether'. Starting from Coulomb's postulates for movement of radiation across an atomic particle, he argued that a better explanation is that the universe is filled by two fluids that interact. In this model, fundamental particles are holes in one fluid filled by the other. Consequently he is able to provide explanations from classical physics for the findings of modern physics. One important consequence is that intensity of light decays faster than currently believed; therefore distances to far off galaxies may be overestimated.

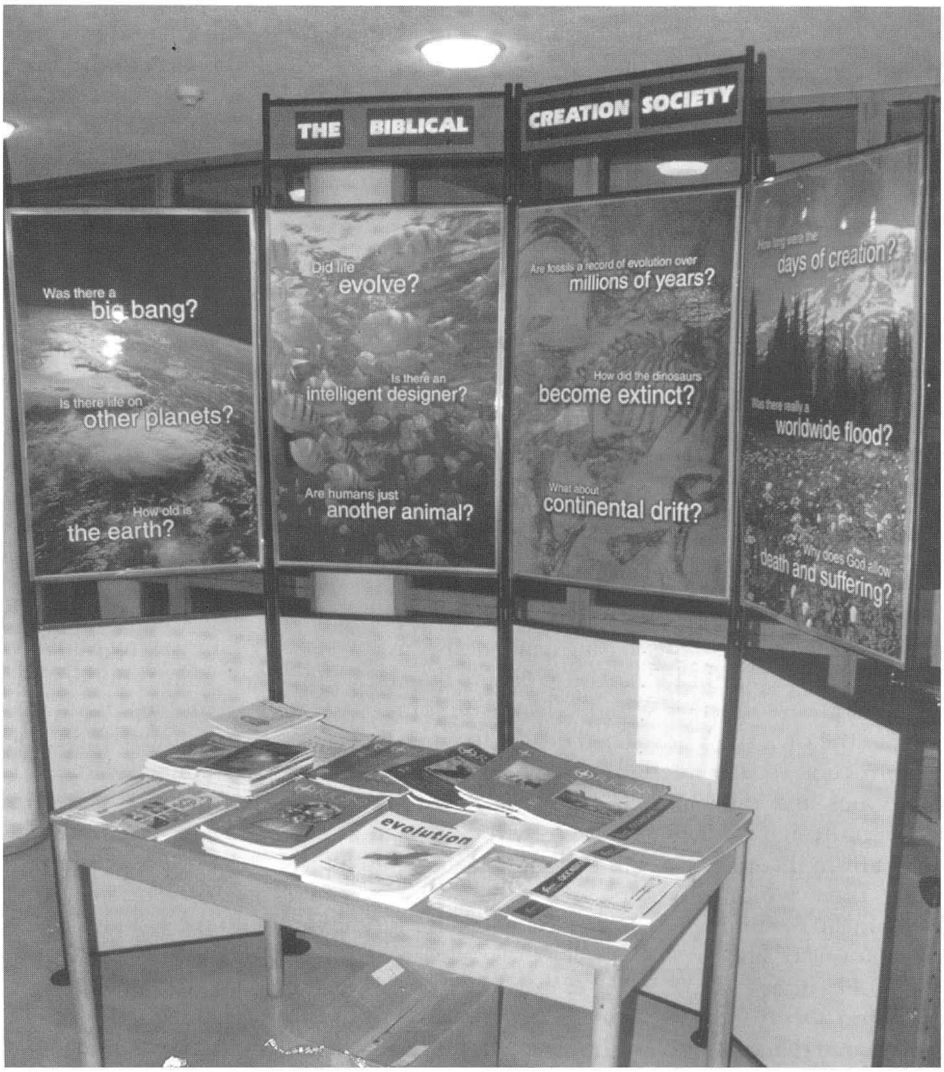
A paper on the *Doctrinal implications of biblical creation* was presented by **Dr. John Peet** (U.K.). He demonstrated that where we stand with regard to the Bible's account of creation affects our doctrine of God, the Scriptures, man, the fall and salvation. If evolution is true then God is not the God of the Bible. The God of the Bible is sovereign; therefore the origin of life was not due to chance. He is omnipotent and not limited by scientific processes. God is trustworthy and we can trust his record of the events of creation. God is good; therefore He would not have used processes involving natural catastrophe and death to create a good creation. God's word is the supreme authority and therefore Genesis is historical and the meaning of Genesis 1 is given by a plain reading. Man is made in the likeness of God; we are not the image of an ape. Therefore, our nearest relative is God. The universe was designed and made to be mankind's home, of which we are stewards. Our code of ethics, whether we are selfish or self-sacrificing, our idea of responsibilities and rights and our attitude to people flows from our understanding of Genesis, as does our attitude to work, rest and marriage. Morality has a basis in either creation or evolution—polygamy makes evolutionary sense as does murder and ethnic cleansing. If we do not punish animals for these things, why punish people for them? In the doctrine of the Fall we understand why work becomes labour and relationships are shattered. Before the Fall God talked with man; now men and women accuse each other, health becomes sickness, life becomes death. Sin is revolution, hence God's judgement and the beginning of enmity, pain, conflict, toil and death. Our assurance of salvation depends on God's word. If evolution is true, atonement, re-creation and the new birth make no sense. The last things are linked to the Flood; if the Flood is a myth then so is our ultimate salvation. Either we agree with Romans 11:36 (from him and through him) or we agree with Nebuchadnezzar who claimed to have no need of a Creator because he did it all. We should have the same attitude that Job did when he is given a creation lecture to show God's greatness and he humbles himself.

We were encouraged in *Presenting our message*, by **Mr. Roydon Bolton** (U.K.) to make use of the various computerised tools at our disposal, as was amply demonstrated by their use during the congress.

The first non-U.K. speaker was **Dr. Ioan Strainescu** (Romania) who described his *Axioms of the scientific model of Creation.* Science has to conform to criteria of testability or logical probability. It deals with cause and effect and information. It is objective and independent of the observer. In deriving axioms for scientific creation the starting point is the revelation that God is the first cause and was not created, but is infinite, eternal, omnipotent and omniscient. Dependent axioms are that the basic laws of nature are implanted in creation, mass/energy is constant, entropy increases and catastrophe is a local rapid increase in entropy. Rapid creation of optimal conditions is required and information in genetic codes is decreasing. He also presented some derived propositions regarding the Earth, one of which is a short-lived magnetic field. His methodology is based in meta-theory that gives rise to the proposed axioms.

Mr. Peter Wilders presented a paper by **Dr. Guy Berthault** (France). *Geological dating principles questioned* was an assessment of the geological principles underpinning the geological column that had been presented to the French Academy of Sciences. Berthault's assessment is based on his research on lamination and sedimentation. His experiments in lamination started in 1974 and confirmed the problems with the principles of stratigraphy and Steno's three postulates that are the basis of stratigraphy. Classical geology does not commonly take into account the effect of current flow that would have occurred during marine transgressions and regressions. Changes in flow rates result in the formation of multiple facies (a series of strata that are of similar nature) that form together downstream of the current flow. Such strata are not successive layers when formed in a current. Berthault suggests that mountain uplift could result in perturbation of the rotation of the Earth and result in transgression of the sea onto the land. Various groups of facies would result from such transgression/regression events. These principles may be applicable to microfossils. However their applicability to larger fossils is uncertain and the role of currents in the formation of biozones in the strata is not clear.

Wednesday's proceedings began with the paper on *Early 19th century British scriptural geologists* presented by **Dr. Terry Mortenson** (Hungary). This was a review of the geological controversy between uniformitarian and catastrophist geology and the 'scriptural geologists' of the early 19th century. We were reminded of key elements of the historical context: the teachings of Galileo, who claimed that the Bible tells us how to go to heaven not how the heavens go, and Francis Bacon with his two separate books of observational science and scriptural truth. These principles were used to falsify the work of the scriptural geologists. We were also reminded of the effect of other key ideas that contributed to the overthrow of biblical truth, for example the Earth condensing from a gas cloud, Lamarckian evolution, an old Earth, old-earth catastrophism, geological uniformitarianism, stratigraphy and index fossils. Furthermore, there were leaders within the church who were abandoning a literal interpretation of scripture and accommodating these new ideas (*e.g.* Sedgwick and Buckland). Thus, when Lyell published, the church had already abandoned a literal view of Genesis. In this context the scriptural geologists expressed their opposition to the loss of a literal interpretation of Genesis. They were misrepresented by the establishment but their arguments were not refuted. George Young (1777–1848) was one of


THE BIBLICAL
CREATION SOCIETY
Was there a big bang?
Is there life on other planets?
How old is the earth?
Did life evolve?
Is there an intelligent designer?
Are humans just another animal?
Are fossils a record of evolution over millions of years?
How did the dinosaurs become extinct?
What about continental drift?
How long were the days of creation?
Was there really a worldwide flood?
Why does God allow death and suffering?
evolution

The new BCS display stand at the 7th ECC

Dr. Marc Surtees (left) and Dr. Terry Mortensen on the 7th ECC trip to Down House, the home of Charles Darwin

the four mentioned and is considered to be the most geologically competent of the scriptural geologists. He was a student of Playfair, had trained as a scientist and worked for 40 years as a pastor in Whitby. He published 21 books including *Scriptural Geology* and contended that the fossils were the result of the Flood. Three others discussed were George Fairholme, John Murray and William Rhind. They all maintained the accuracy of scripture particularly regarding the Flood, the fourth commandment and the biblical understanding of death as a result of the Fall. They exposed the logical errors of interpretation in uniformitarianism. Other points raised by them included graded transitions in sedimentary deposits (*e.g.* sandstone blending into limestone without bioturbation, indicative of rapid successive deposition), polystrate fossils, the unreliability of shell-forming creatures as index fossils due to taxonomic problems of distinguishing species when shell morphology depends on the chemical environment, and geologically misplaced human fossils. They insisted on the unreliability of the infant science of geology compounded by the fact that most worked from local geology (*e.g.* Cuvier worked only in the Paris basin and Hutton published before doing any field work). Therefore, the scriptural geologists argued against the catastrophists and uniformitarians. They were ignored because they challenged the reigning paradigm, not because of their observations. Deism, atheism and liberal theology defeated them. Two lessons for today were offered by way of conclusion. The claim, by scholars such as Knoll and Numbers, that young-earth creationism is a 20th century phenomenon is falsified. Their writings show the error of the old-earth intelligent design movement in ignoring the flood and keeping the Bible out.

A critical look at the Late Paleozoic fish-tetrapod transition was provided by **Mr. Paul Garner** (U.K.) in a paper called *Conquest of the land?* The transition from fins to limbs is said to have occurred during the upper Devonian. *Ichthyostega*, with large pelvic and pectoral girdles, digits on well-developed limbs, a lateral line, fish-like middle ear and a tail fin is thought to be among the earliest tetrapods. Today there are eight known Devonian genera of tetrapods and they are globally distributed. They are unusual animals with 8, 7 or 6 digits. Different putative ancestors have been proposed but currently there is no fossil that is considered to be the direct ancestor of any of these tetrapods. There is an unresolved conflict between the radiometric/palæomagnetic and the biostratigraphic ages; for example, rocks lying under fossils found in Greenland have been dated radiometrically as Carboniferous. There are also dating problems associated with trackways of these Devonian tetrapods. There have been different theories advanced for the environmental conditions that are supposed to have caused a transition from fish to tetrapod. The current theory is that the Devonian tetrapods were aquatic and the limbs were a useful exaptation (not adaptation).* To date, the fossil evidence, which is largely fragmentary, appears to show a group of animals that have a mosaic of characteristics *e.g.* tetrapods with certain fish-like features. This evidence presents a number of problems from the point of view of a classical Darwinian transition. For example there is no fossil evidence for a transition from paired fins to limbs with digits, wrist and ankle joints. The lobe-finned fish have larger fore limbs and the land tetrapods have larger hind limbs. A creationist response was proposed on the basis of the available evidence. The Devonian tetrapods are 'chimeromorphs', with characteristics of more than one group. They are extinct amphibious animals with a body plan designed for a particular habitat associated with Devonian and some Carboniferous deposits. These fossils provide little support for a clear evolutionary transition from fish to tetrapod. The question that remains unanswered is, why do they briefly appear then disappear at that stage of geological history?

Lunch was followed by *The message of the tree rings*, by **Mr. H. Hoogerduyn** (The Netherlands) who presented evidence in support of his theory that the ice age took place in the days of Abraham, Isaac and Jacob. The main features of this impact winter model are an ice age lasting 500 years, four major climatic cycles and fluctuations due to oscillations of the axis of rotation of the Earth. The ultimate cause of the ice age was cosmic bombardment. Three lines of evidence were presented to support an ice age during the days of Abraham, Isaac and Jacob. The first line of evidence was biblical. Genesis 41:54–57 describes a famine in all the lands; this was linked to the ice age, said to have been caused by the impact of an asteroid. Evidence that asteroid impacts occurred during the Old Testament period was provided by Isaiah 24:17–20 which was interpreted as a description of an impact event. The book of Job describes ice age conditions and Job 38:31–33 appears to describe the effects of the stars. The Bible states that Abraham, Isaac and Jacob all lived through different famines and the suggestion is that these famines were associated with periods of increased cold during the 500-year-long ice age. Second, there is archæological evidence for catastrophic impact causing the collapse of Bronze age civilisations. Reference was also made to an ancient map showing Greenland free of ice. Thirdly, there are tree ring data from Bristlecone pines that are viewed as showing sharp swings in climatic conditions. There appears to be some correlation with the Vostok ice core, pollen in clays and oxygen isotopes in deep sea cores. The proposal is that absolute dating can be obtained from the tree ring data and that all these data can be correlated. The correlated cycles indicate fluctuations during the ice age with various warm and cold periods.

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* An exaptation is a characteristic that is said to have evolved for one use, only to be co-opted for another, different use. In this case, the limbs are thought to have evolved for locomotion in the water and only later pressed into use for walking on land.

Mr. Peter Bluer (U.K.) presented *Mathematical evidences for Genesis 1*, which was based on Bible numerics first described by Ivan Panin about 100 years ago. He showed how the first words of the Bible (Genesis 1:1) are related to the function $f(g)=37x + 6y$. This function is related to the numerical value of the first 7 Hebrew words in the first verse of Genesis. By summing some of these numbers other numbers can be obtained that are factors of the prime number 37 that appears in the function above. This, and the fact that other derivations of the prime number 37 and its numerical reflection (73) show a remarkable symmetry, were presented as proof that the Bible is reliable.

Dr. Bill Cooper (U.K.), in collaboration with **Mr. Malcolm Bowden**, gave a paper with the title *The Japanese plesiosaur reconsidered*, and argued that we should not accept the explanation that the so-called Japanese plesiosaur was a rotting basking shark. Several pieces of evidence were presented to support the claim that it was a plesiosaur-like creature. There was red meat visible around the spine. There were dermal fibres that were not characteristic of a shark. However, the analysis of the amino acid content of the dermal fibres was inconclusive. The smell was said to be similar to that of a decaying mammal. Some of the photographs showed what appeared to be nostrils on what is thought to be the remains of the head. There were fat-like tissues. The dorsal fin appeared to be absent (those supporting the basking shark interpretation conclude that it had slipped round during decomposition). It was claimed that the drawings were not consistent with what is visible on the photographs.

The final talk on Wednesday was by **Mr. Malcolm Bowden** (U.K.) who started with a review of the Piltdown Man fraud. Several pieces of evidence were presented that implicated the Natural History Museum in the planning and execution of the fraud. The discovery of a fraud by the Museum appears to have been carefully managed and Charles Dawson was made a scapegoat. It is indeed surprising that the abrasions on the teeth that led to the detection of fraud were only noticed 40 years after the skull was first found; they should have been seen during the initial careful examination that would normally be carried out on a find of this importance.

He then went on to highlight some items that he feels need to be addressed by creationists. First was the 'water vapour canopy', its role in the Flood and the effect that the loss of this canopy would have had on the life span of humans. It was proposed that the effect of this canopy on infra-red radiation emitted from the surface of the earth is significant. Secondly, the Flood myths that have many consistent features provide powerful evidence of the reliability of Genesis. Third, evidence from the Greenwich Observatory that supports the theory that the Sun is shrinking was briefly discussed. Fourth, much evidence exists to corroborate the biblical record of Joshua's long day, including folk stories from the American continent which tell of a long night, and one from Fiji which has the Sun remaining stationary on the horizon. Fifth, we were urged to do more work on the origin of clays that are supposed to be Flood material. Currently there is lack of a credible mechanism for eroding rock into clay, but the action of hydrothermal jets rising to the surface could provide a solution. Sixth is the problem of the sequence of the fossils in geological strata. There is a need for a

Dr. Nancy Darrall at the Piltdown Memorial, which marks the spot where the remains of the infamous 'ape-man'—later revealed to be a hoax—were discovered in 1912

Warm Commendation from Henry Morris

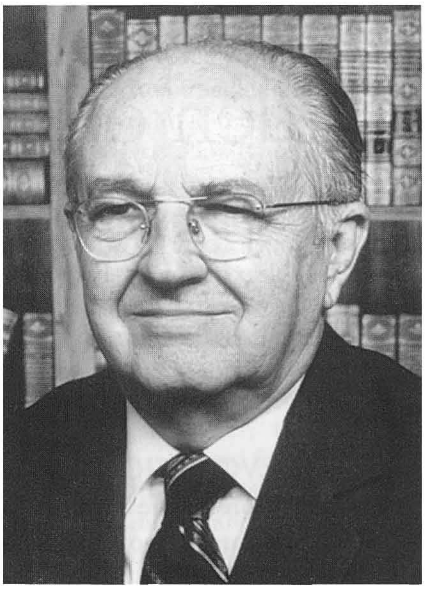

Photo courtesy of ICR

WE WERE very pleased to receive the following warm letter from Dr. Morris following the publication of our Basics & Beyond edition of *Origins* earlier this year:

Dear Friends,

I have just seen your *Creation Manifesto*, and want to thank you for such an excellent and comprehensive statement. For whatever it is worth, our ICR Tenets of Creationism are fully compatible with it, though not nearly as extensive.

Thanks also for your special issue of *Origins* (No.27). This is a fine summary of the scientific evidence for our recent creation belief, and I hope it will have wide influence for the truth.

Sincerely in Christ,
Henry M. Morris,
President Emeritus.

Dr. Henry Morris will be well known to many of our readers as a prolific author on creation-evolution and Christian apologetics. His most famous book is undoubtedly *The Genesis Flood*, co-authored with Dr. John Whitcomb, and widely regarded as playing a major role in the worldwide revival of creationism in the 1960s. Dr. Morris is also President Emeritus of the Institute for Creation Research (ICR) in California.

We would like to thank Dr. Morris for his kind words and join in his prayer that the Lord will use our publications to change hearts and minds over this vital issue.

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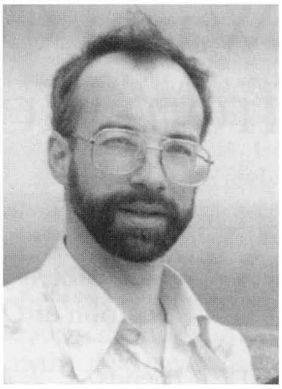
comprehensive answer to this problem. We were warned of the dangers of ignoring the decay of the speed of light, the Japanese 'plesiosaur', the shrinkage of the Sun and unresolved disagreements over models of the Flood. Finally, we were reminded how important it is that our motivation is right. Our aim should be to glorify God with an overriding passion for truth.

Thursday was taken up with a visit to Down House and Piltdown Farm with the conclusion to the official proceedings provided by **Dr. Stuart Burgess** (U.K.) who gave a summary of his book *Hallmarks of Design*. We were reminded of the need for care when talking about the evidences of design. Complexity and beauty are evidences of design but a pebble can be both while it is not designed. Six hallmarks of design were proposed. The first is an irreducible mechanism. The origin of such a mechanism cannot be explained by invoking Darwinian gradualism. An example is the human knee joint, which depends on its geometry to function. There are four parts that must be present: the femur, tibia and two cruciate ligaments. The second hallmark is that of complete optimum design which implies adaptation and the lack of functionless parts. The third hallmark is added beauty or non-functional embellishments. Care is needed when discussing this hallmark as an aeroplane has functional beauty which is not an evidence of design while an ornate column has added beauty. Complex bird song (with rhythm, melody and unity) and colour were suggested examples (especially the colours of a peacock feather). The beauty of the human body is also a hallmark of design. The fourth hallmark is extreme similarity. An intelligent planner replicates useful features, for example the similar limb design of different animals and the existence of marsupial and placental mammals that appear externally similar. The fifth hallmark is extreme diversity. An intelligent designer is also able to produce extreme diversity of design features, for example a hummingbird able to hover and the camel with its specialised system to eliminate nitrogenous waste via the stomach. There is an extreme range in body mass (*e.g.* the whale and shrew). The sixth and final hallmark is man-centred features that have no selective advantage. For example, the packaging of a banana or orange with correct nutritional content, sheep's wool and cotton providing ideal fibres for clothing, the horse designed for riding and air designed for breathing. All these features reveal the designer and glorify Him (Romans 1:20 and Psalm 147:5).

Overall the conference was an encouragement especially as it afforded an opportunity to meet other creationists. It was especially good to see the way that the evidences of design were used to point to the glorious Creator. This is in contrast to the intelligent design movement, which on the whole tends to shy away from giving a biblical context to their work.

Snake Evolution and the Garden of Eden

Steven Robinson



> *And the* LORD *God said to the serpent, 'Because you have done this, cursed are you above all cattle, and above all wild animals; upon your belly you shall go, and dust you shall eat all the days of your life.* [Genesis 3:14]

ARE EVOLUTION and creation incompatible? If not, how much variation in the original kinds should we be contemplating as their representatives on the Ark spread out and multiplied? I invite you to consider the following.

The only animal mentioned by name in the account of creation is the snake. It is referred to as '*the* snake' (or serpent). As with the first human beings, God may have made only one pair of this animal kind, so that in cursing the snake after the Fall of man He cursed the whole kind. If that is so, then according to Genesis all the varieties of snake we know today must descend from one ancestor—an ancestor which originally had legs and only later slithered on its belly.

Figure 1 shows a very recent analysis ('cladogram') of living and extinct snake groups, based on number of shared characters. Boas and pythons, for example, are more similar to each other than to other groups and form the *Boidæ* family. The next most similar group is the *Erycinæ*. Together, the three groups form a 'superfamily' called *Booidea*. The implication is that this pattern represents a process of gradual diversification over time. The groups believed to be oldest are on the left, and the youngest are on the right. All snakes belong to the suborder *Serpentes*.

The present diversity of snakes is enormous. Cobras, for example, are very different from pythons or from thread snakes (*Leptotyphlopidæ*). Yet without having to go through a course in herpetology we all know a snake when we see one!

The fossil record of snakes is rather poor, partly because most inhabit terrestrial environments, which are usually places of erosion rather than deposition, and partly because the skeleton of a decayed snake is delicate and quickly dissipates. Consequently, it is not possible to reconstruct a reliable family tree of snake evolution from the fossil evidence. Nonetheless, the extinct groups do in general seem less 'derived' than modern ones—hence their position on the left of the cladogram—and modern snakes do appear, if at all, only late in the fossil record. In other words, modern ones seem to have 'evolved' from more ancient types.

The oldest fossil is that of *Lapparentophis*, from the Lower Cretaceous of North Africa, but the only remains we

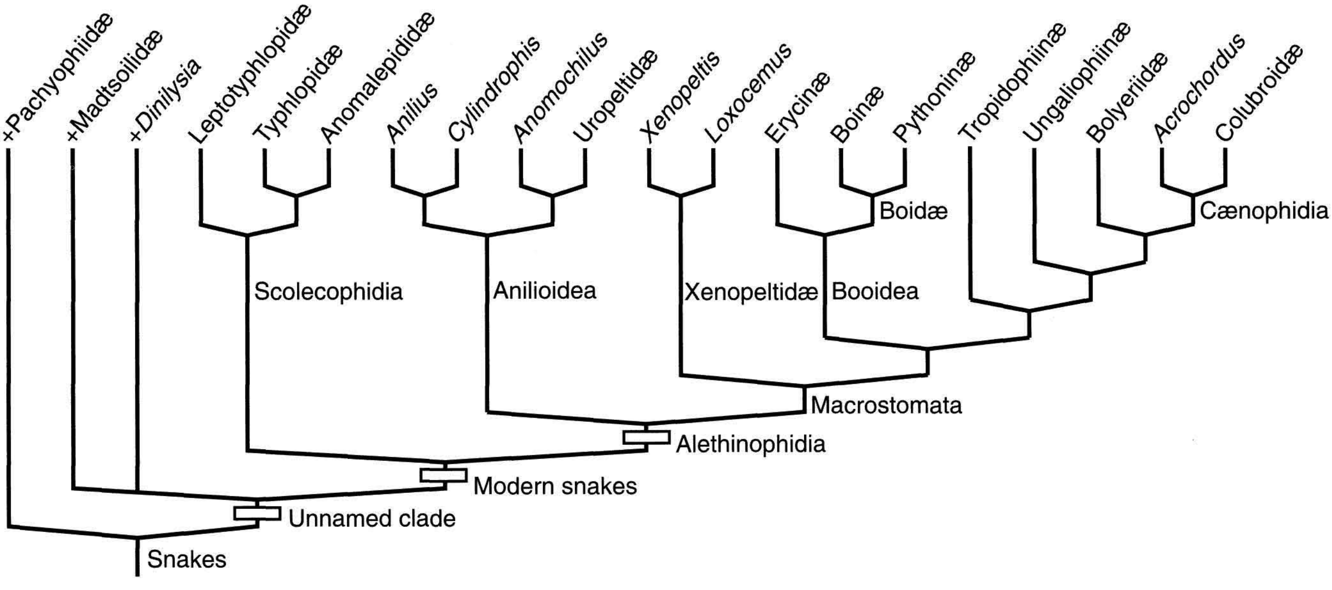


Figure 1: Cladogram for snakes based on an analysis of 234 morphological characters (Scanlon & Lee 2000). Read as follows: Colubrids and Acrochordus *(designated 'Cænophidia') share characters not possessed by others in the group, likewise the Cænophidia and Bolyeriids share characters not possessed by others, and so on. Snakes closest to the base are predicted to be the oldest members and therefore should appear early in the fossil record. Extinct taxa are marked by '+', but representatives of most of the oldest taxa are still living today. An analysis by Tchernov et al. (2000) agrees with this scheme in most respects but considers the Scolephidia to be more primitive than* Dinilysia *and, oddly, ranks* Pachyrachis *between the Xenopeltids and the Booidea.*

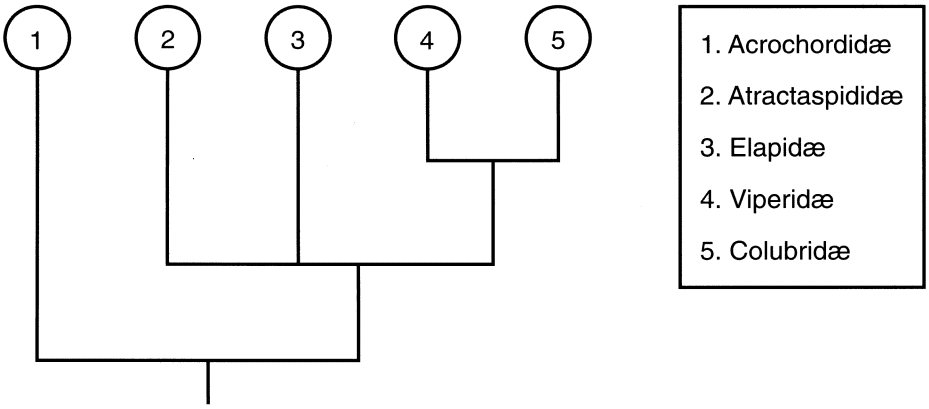


Figure 2: The Cænophidia group in more detail. Living sea-snakes are within the Elapidæ family.

have of it are a few vertebræ. The most complete fossil comes from the Upper Cretaceous of Argentina—a 6-foot skeleton dubbed *Dinilysia patagonica.* The largest snake known was a Palæocene specimen named *Gigantophis*, from Egypt. Related to the modern boids, the animal is estimated to have measured fifty feet long.

Most of the earliest known snakes killed their prey by suffocation, coiling round the ribcage and tightening their squeeze when their victim breathed out. Poisonous forms did not evolve until later, when certain colubrids—a subgroup within the *Colubroidea* group (Figure 2)—acquired greatly enlarged teeth at the rear of their jaw. These smaller, faster types of snake appeared in the Oligocene. Their fangs had shallow grooves down which venom trickled into the prey from a gland. As continental temperatures fell, the boids disappeared from many areas and the better-adapted colubrids took their place. Today colubrids account for over two-thirds of living snake species, including a large number of rear-fanged ones, but not all of them are poisonous.

Shortly after the first rear-fanged snakes, another subgroup, the elapids, arose. In these the fangs are situated at the front of the mouth and can therefore be used for striking, as well as incapacitating animals that have already been seized. The grooves are deeper than in the rear-fanged snakes and meet at the edges to form a hollow tube. When the snake bites, venom is injected through the fangs as through hypodermic needles. Living representatives of the elapids include the cobras and the sea snakes.

The first elapids were soon followed by the first viperids. Vipers are the most highly specialised of the snakes. Their fangs are much longer than in the elapids—so long that, when they are erected, the snake cannot close its mouth. Consequently, vipers use a special rotating bone to fold the fangs up against the roof of the mouth; they spring into position when the snake bites (Figure 3). Pit vipers also have a fossil record. These acquired a number of heat-sensitive pits on the front of their face, which they use for finding their warm-blooded prey at night. Although this innovation, according to the theory of evolution, is supposed to be accidental, the same feature was acquired independently by the boids! Finally, one group of pit vipers developed a unique structure at the end of their tail. Made up of interlocking pieces of unshed skin, it could be loudly rattled and used as a warning device against predators. The rattlesnakes are consequently thought to be the most specialised of the viperids.

Taken together, the biblical, morphological and fossil evidence all harmoniously suggest that snakes had a common ancestor.

But perhaps snakes themselves evolved from another kind of animal? There is no fossil evidence for thinking so. According to Nicholas Fraser, 'the search for the origin of snakes has proved to be a thorn in the side of vertebrate palæontologists.' Until recently, most would have speculated that they derived from an unknown group of tiny monitor lizards (*Varanoidea*) since these are the animals today that most resemble snakes. Like some lizards today, they are thought to have led a burrowing way of life, tunnelling through loose dirt and sand in search of their prey. Over millions of years the lizards developed a more cylindrical body, lost their limbs and external ears to help them burrow more easily, and replaced their moveable eyelids with a clear brille, or eyecap. Then, having become so well adapted for a digging life, they started to live above ground.

Today this story is looking very dubious. Fossil varanoid lizards and the three most basal snake lineages in the cladogram—*Pachyrhachis*, madtsoiids and *Dinilysia*—were all *large* predators, and they had wide gapes. *Pachyrhachis* was a sea snake (one fossil had the remains of a fish in its stomach), while madtsoiids and *Dinilysia* were either semi-aquatic or terrestrial snakes that were active above ground; they show none of the extensive

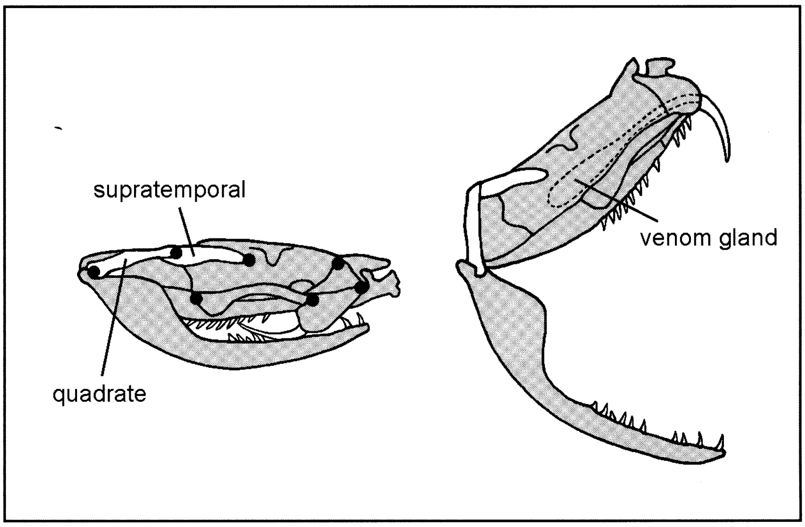


Figure 3. The skull of a viperid snake, showing the jaws closed and open: every part wonderfully and fearfully designed. Closed circles represent hinges.

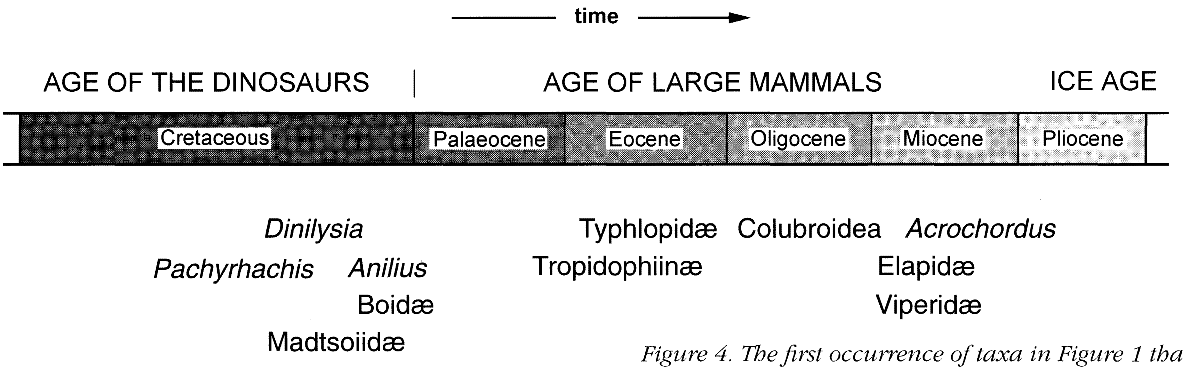


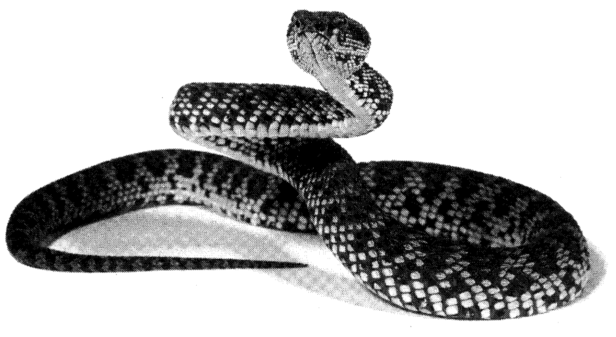
Figure 4. The first occurrence of taxa in Figure 1 that are represented in the fossil record (source: Benton, 1993). Bolyerids (not shown) occur immediately after the Ice Age. Allowing for the paucity of fossils, there is broad correspondence between the cladogram and the fossil record, supporting the view that all snakes derive from a common ancestor. Boidæ appear earlier than predicted.

suite of characters associated with a digging mode of life (Scanlon & Lee, 2000). Burrowing snakes such as the *Typhlopidæ* (blind snakes) are more derived in character and therefore are presumed to have come later. (One might say that they learned literally to 'eat dust'.)

On the other hand, it seems probable that the oldest snakes did have legs. Despite its apparently marine habitat, the oldest snake of which we have adequate remains, *Pachyrhachis*, had tiny but complete (or almost complete) hindlimbs, though not forelimbs. So did *Haasiophis*, a snake from the same deposit. Even today both *Scolecophidia* and *Booidea* have traces of a pelvic girdle and severely reduced hindlimbs, as do some other types. By contrast, the most advanced snakes, such as the colubrids, do not. This pattern is of great significance, seeing that according to Genesis snakes were destined to lose the use of their legs as a result of the Fall. Further back in geological time snakes would have had both forelimbs and hindlimbs. No fossils of them have been discovered because the fossil record reflects the recolonisation of the earth after the Flood, and as one goes back in time one comes closer to the point when there were only two snakes on the earth. Consequently, apart from the other factors militating against their preservation, there would have been just very few snakes around.

As well as reflecting the progressive fulfilment of the original curse of Genesis 3:14, snakes illustrate the working of sin and death through creation in the way they acquired new means of killing prey. The ability to inject their prey with venom is a comparatively recent innovation. The strategy of killing by suffocation probably developed as they lost the use of their limbs and would therefore also not be original.

As with the idea that snakes could have originated from tiny lizards, it is difficult to imagine how the changes in jaw design and complex innovations such as venom glands



Evolution: a matter of definition?

The word 'evolution' is used in many different ways and this can be quite confusing, especially to non-biologists! Biologists usually define *microevolution* as change within a species, *speciation* as the origin of new species, and *macroevolution* as the origin of new genera, families, orders, or phyla. Most creationist biologists think that the biblical kind is roughly equivalent to the family or order. On these definitions, a biblical creationist can accept 'microevolution' and even some 'macroevolution'. However, as Steven Robinson points out in this article, such change seems to be primarily the result of the recombination or selective expression of genetic information already present within the created kinds. It does not occur by the addition of functional genetic information and does not result in one biblical kind changing into another. There is no known mechanism for the production of entirely new body plans (what we might call particles-to-people evolution).

So how does one define what constitutes a biblical kind? Steven does not formally address this question, but his approach in practice is to consider a variety of evidences, such as the fossil record, embryological development (as with the vestigial limbs seen in boa embryos), and biblical pointers in Genesis. Incomplete though it is, the fossil record can be evidence both of what is not within a biblical kind (no convincing ancestors to snakes have been identified) and what is within it.

It would be wrong to suppose that the biblical kind can be identified with any particular level of Linnaean taxonomy—such as genus, family, or order. Above the species level, such classifications have no reality in the natural world. There is no reason to suppose that God endowed each kind with the same potential diversity as every other. Some kinds appear to be very stable, having changed little over time—for example, human beings, where the kind might be equivalent to the Linnaean category of genus (*Homo*). Snakes, which are classified in the Linnaean scheme as a suborder (*Serpentes*), would be an example of a kind which has diversified much more radically.

and heat sensors could have arisen from genetic mutations. Some biologists in fact believe that the major changes in snake morphology through time—including the changes which enabled some snakes to move in water—are best explained by the action of Hox genes: switch-boxes that can determine whether or not a particular character which is already present in an animal's gene complex is activated and hence openly expressed. As noted by Martin Cohen and Cheryll Tickle, 'such higher-order genetic changes could have resulted in sudden anatomical transformation rather than gradual changes.' Similar mechanisms are thought to determine successive stages of development in individual organisms—the onset of puberty, for example, or the transformation of a tadpole into a frog.

This is not Darwinian evolution, where innovations occur as a result of genes being miscopied and acquiring a function which, improbably, happens to be beneficial. Rather, if the changes are to be explained genetically at all, they result from the activation of genetic information which was present, but previously latent, in animals from the beginning. To pack such a capacity for co-ordinated variation in a single pair of animals requires foresight, intelligence and creativity of the highest order! Evolution as we observe it in the fossil record and the biosphere today is not the opposite of creation, but a continuing testimony to it—a testimony to the provision of God for a world that never stands still.

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Steven Robinson has an M.A. (Cantab.) degree, lives in Aylesbury and is currently co-editor of the Journal of the Ancient Chronology Forum.

Origins: how YOU can help

There are many ways in which *you* can help us as we seek to expand and develop the journal. Please prayerfully consider whether you can make a contribution in any of the following areas:

Writing

We are looking for new contributors, especially those able to write at a popular level. Popular articles need not be long (usually no longer than 3,000 words) but will need to be written in plain English. They should make a simple point rather than develop a complex argument, and could be on any biblical, scientific or historical theme related to origins.

Illustrators and photographers

Perhaps you could help by providing illustrations or non-copyrighted photographs? If you have skills in this area, we would love to hear from you.

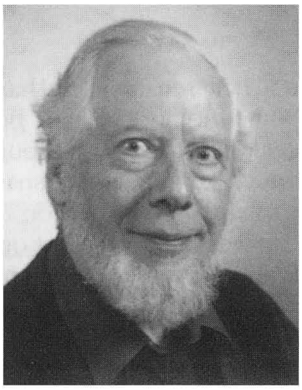
Other areas of help

Reviews of relevant books, videos, television and radio programmes are also very welcome. Another way of contributing is to submit a question to which you would like an answer. We can then 'ask an expert' to answer your question, or even develop it into an article.

Reader's Viewpoint

Observations on the Creation / Evolution Debate—by a Layman

Jeff Lowe



WHEN I was at school, a very long time ago, one was allowed to 'drop' science at the age of about 13 and take extra of other subjects. I duly 'dropped' chemistry, *et al.*, with great glee, as I was an artist at heart. It therefore came about that, in scientific terms, I am definitely classified as a layman. However, I suppose it is possible to be a relatively discerning layman, and, having taken an interest in the C*v*E debate for several years, I submit the following observations.

I have been looking through and sometimes even reading *Origins* for some time now and have got the feeling that some of the articles require one to be a graduate scientist in order to really understand them. This is definitely not true for what I am about to say. So, then, what is the excuse for penning these thoughts at all? It is simply that I thought that a review of the views of an interested—and possibly slightly naïve—layman could be of use both to other laypersons and to the heavyweight academic scientists amongst us, if only to spark off further debate.

Now as I am not a scientist, the first section of these 'Observations' might appear to be a bit tedious to read. This is because the object is to consider some of the things being said by scientists who, so far as I know, make no religious profession. It is therefore necessary to quote what they have said, and thus be able to draw, as a layman, general conclusions. What particular scientists say may, of course, be 'incorrect' in the eyes of other scientists. However, if enough scientists say broadly the same kinds of thing, and in this case indicate their individual and cumulative unease with the big 'E' in all of its manifestations, then as a layman one is entitled to draw certain kinds of conclusions. The second section seeks to consider predominantly secular views upon the matter of the length of time *Homo sapiens* has been upon planet Earth. Again, not being either a scientist or an archæologist, I have no expertise to offer at a personal level. However, I think it fair to say that the secularists quoted come to general conclusions which are not, in the main, very different to the biblical viewpoint. The third and final section considers the matter of, particularly, British unwillingness to accept the creationist stance. I admit that what is said in this section might be deemed mildly controversial.

'Science': the 'Facts' [1]

Perhaps it would be best to begin these observations by reminding ourselves of the 'facts' of science which can be said to have been clearly established. To do this, it may be useful to consider some of the points that have been conceded by non-creationists.[2] The following are a few well known quotations which jointly tend to establish the extent of the current doubts concerning the validity of Darwinism:—

Do the facts prove evolution?

> 'Biologists are simply naïve when they talk about experiments designed to test the theory of evolution. It is not testable. They may happen to stumble across facts which would seem to conflict with its predictions. These facts will invariably be ignored and their discoverers will undoubtedly be deprived of continuing research grants.'—*Professor Whitten, Professor of Genetics, University of Melbourne, Australia, 1980. Quote 10 in Snelling (1990).*
>
> 'I know that, at least in paleoanthropology, data are still so sparse that theory heavily influences interpretations. Theories have, in the past, clearly reflected our current ideologies instead of the actual data.'—*Dr. D. Pilbeam, Physical Anthropologist, Yale University, USA, 1978. Quote 15 in Snelling (1990).*

Do the fossils prove evolution?

> 'The absence of fossil evidence for intermediary stages between major transitions in organic design, indeed our inability, even in our imagination, to construct functional intermediates in many cases, has been a persistent and nagging problem for gradualistic accounts of evolution.'—*Stephen Jay Gould, Professor of Geology*

The cover picture is a tablet recording the Babylonian Creation myth. In this article, Jeff Lowe compares the various historical references to the biblical events showing that they give comparable chronological information. The Babylonians, along with other ancient civilisations, recorded the Creation and Flood accounts interpreted within their own world views. These are clearly corrupted versions of the straightforward biblical record. Sceptics say the Babylonian account predates the biblical one, but such a claim is without substance. However, the existence of these varied records does show that knowledge of the Creation is as old as mankind itself.

and Palaeontology, Harvard University, USA, 1980. Quote 34 in Snelling (1990).

What about the evolutionary origin of plants?

'Can you imagine how an orchid, a duckweed, and a palm have come from the same ancestry, and have we any evidence for this assumption? The evolutionist must be prepared with an answer, but I think that most would break down before an inquisition.'—*E. J. H. Corner, Professor of Tropical Botany, Cambridge University, 1961. Quote 46 in Snelling (1990).*

What about the evolutionary origin of apes?

'In spite of recent findings, the time and place of origin of order Primates remains shrouded in mystery.'—*Elwyn L. Simons, Department of Geology and Geophysics, Yale University, USA, 1969. Quote 58 in Snelling (1990).*

What about the evolutionary origin of man?

'... no scientist could logically dispute the proposition that man, without having been involved in any act of divine creation, evolved from some ape-like creature in a very short space of time—speaking in geological terms—without leaving any fossil traces of the steps of the transformation ... students of fossil primates have not been distinguished for caution when working within the logical constraints of their subject. The record is so astonishing that it is legitimate to ask whether much science is yet to be found in this field at all.'—*Lord [Solly] Zuckerman, Anatomist, 1970. Quote 64 in Snelling (1990).*

'Modern apes, for instance, seem to have sprung out of nowhere. They have no yesterday, no fossil record. And the true origin of modern humans—of upright, naked, tool-making, big-brained beings—is, if we are to be honest with ourselves, an equally mysterious matter.'—*Dr. Lyall Watson, Anthropologist, 1982. Quote 65 in Snelling (1990).*

Now it could be argued that some of these quotations are a little 'dated', as the most recent of them was published in 1982. What is being said since then by non-creationists? Well, here is a sample:—

Is Evolution Theory myth?

'The influence of evolutionary theory on fields far removed from biology is one of the most spectacular examples in history of how a highly speculative idea for which there is no really hard scientific evidence can come to fashion the thinking of a whole society and dominate the outlook of an age. Considering its historic significance and the social and moral transformation it caused in western thought, one might have hoped that Darwinian theory was capable of a complete, comprehensive and entirely plausible explanation for all biological phenomena from the origin of life on through all its diverse manifestations up to, and including, the intellect of man. That it is neither fully plausible, nor comprehensive, is deeply troubling. One might have expected that a theory of such cardinal importance, a theory that literally changed the world, would have been something more than metaphysics, something more than a myth.'—*Dr. Michael Denton (1996, p.358).*

Is Evolution Theory truth?

'In discussing neo-Darwinism as a paradigm, a key question seems to me to be, what is it exactly that drives Darwinism? I call this a key question because virtually every apparent scientific discovery that stimulated the theory in the first place and later assisted with its development has now been found to be false. ... If everything that made evolutionists believe in Darwin turns out to be false, why do they go on believing? The answer I think is that, on one hand, there is no credible alternative and, on the other, whatever theory we adopt must seem reasonable. Neo-Darwinism is simply the only 'reasonable' theory we have. Most scientists and teachers in the Earth sciences and life sciences still feel that some form of Darwinian evolution is the only reasonable hypothesis. And they hold this perfectly natural and understandable belief not because of the evidence, but despite the evidence.'—*Richard Milton (1993, pp.202-203).*

And in the re-issue of this book, Richard Milton says:—

'As this book has set out to show, Darwinism the urban myth has many faces. There is the myth of radiometric dating; the myth of uniformitarian geology; the myth of the gradualist fossil record; the myth of beneficial mutations; the myth of natural selection; the myth that evolution is blind; the myth of the beak of the finch; the myth of the biogenetic law; the myth of vestigial organs; the myth of homology; the myth of the 'missing link'. ... Perhaps in one sense this transformation to mythic status gives some ground for optimism. After all, science has demonstrated an enviable track record at eventually destroying its own myths, however long they have persisted and whatever the attempts by inquisitions and censors to maintain them.'—*Richard Milton (1997, p.272).*

Most of those who are called 'creationists' are Christians. It is therefore interesting to note the views of a religious Jew who is a physicist:—

'Conventional wisdom holds that life arose spontaneously. In the remote past a simple living organism is supposed to have formed by chance out of inert matter. That organism is then supposed to have reproduced and developed into the life of today through random variation shaped by natural selection. Although not yet widely recognised, the discoveries in biology during the past thirty or forty years, together with elementary principles of information theory, have made this view untenable.

A few biologists have pointed this out, but the majority seem to be unaware that there is a problem. The main problem, in my opinion, is the nearly universal belief among biologists that random variations shaped

> by natural selection produces large-scale evolution. According to this belief random variation can lead to the large scale evolution necessary for all the life of today to have developed from something even simpler than a single cell.
>
> Information theory, which was introduced as a discipline about half a century ago by Claude Shannon, has thrown new light on this problem. It turns out that random variation cannot lead to large evolutionary changes. The information required for large-scale evolution cannot come from random variations. There are cases in which random mutations do lead to evolution on a small scale. But it turns out that, in these instances, no information is added to the organism. Most often, information is lost. A process that adds no heritable information into the organism cannot lead to the grand evolutionary advances envisioned by the neo-Darwinians.'—*Dr. Lee Spetner (1997, p.vii).*

The words of nine scientists and one journalist have been quoted above. What they appear to be saying cumulatively appears to justify Richard Milton's view that neo-Darwinism is simply a perpetuator of myths. Now this mythology insists upon the view that the world is very old, and that the human race itself is 'old'—certainly older than is suggested by the biblical chronologies. Is this view in fact supported by an objective survey of secular literature?

The Age of *Homo Sapiens*—The 'Human Race'

According to biblical chronology, the human drama has, to date, taken about 6,000 years to unfold. This point is, of course, acknowledged in the Jewish Calendar. At the time of writing, the Jewish year is 5758 (Anno Mundi) as the Jewish date of Creation is BCE 3760 (see, for example, *The Standard Jewish Encyclopædia*, W. H. Allen, 1966, p.390). Although the calculations of the date of Creation undertaken by biblical scholars over the years vary, a rough average is about 4000 BC. The best known of these is that by Archbishop James Ussher who cites BC 4004. This date is printed, together with the Archbishop's other calculated dates, into many editions of the Bible. Admiral J. H. Selwyn (1899, p.v, 1, *etc.*) gives BC 3958 in his *Biblical Chronology*. Martin Anstey cites BC 4124 in his extensive study of chronology published in 1913. His work is to some degree based upon the earlier work done by H. Fynes Clinton, who in turn made extensive use of the *Canon of Ptolemy*, as have many other chronologers. Clinton's date for the creation of Adam is BC 4138 (as cited, for example, by Sir Robert Anderson, 1957). A. E. Ware, in his chart of the *Chronology of the World*,[3] suggests BC 4075. Dr. H. Grattan Guiness (1902, pp.458–459) favours BC 4130. Evidently, therefore, conservative scholars, using biblical chronology as far as is possible, combined with *Ptolemy's Canon*[4] for the dating of the Roman, Greek, Persian and Babylonian kings, arrive at a date for the creation of Adam of *c.*4000 BC. (The mean date of those mentioned above is BC 4072).

Now, how does all of this relate to 20th century secular thinking? Obviously the Darwinist-led media would regard such dates for the history of mankind as a joke—as pure mythology, only to be believed by religious 'nuts'. But are they justified in expressing such a view in the light of their own statements? Let us examine briefly what three authoritative sources have to say.

Encyclopædia Britannica's statement upon Mesopotamia reads, 'It was one of the cradles of human civilization.' It goes on, '. . . Archæological excavations in Mesopotamia, conducted since about 1840, have revealed evidence of settlement back to about 10,000 BC.' (How this figure is arrived at is not made clear in the text). It also states that, 'Two epochal developments occurred in relatively rapid succession during the 4th millennium BC: the birth of the city and, about 3000 BC the invention of writing. Both took place in Southern Mesopotamia in a region occupied by the Sumerians.' (*Encyclopædia Britannica*, 15th edition, Volume 8, p.48.)

Under the heading 'Mesopotamia: Ancient Civilisation', *Colliers Encyclopædia* (1989, Volume 15, Macmillan, New York, pp.731, 733) states that, 'Mesopotamia is the land where the world's first historic civilization, with written documents, began; this historic civilization endured for about 25 centuries, from the time of the introduction of writing to the conquest of Babylon by the Persians in 539 BC'. It also states that, 'As a fertile, accessible and strategically located valley, Mesopotamia was destined from the start to attract transients and settlers from all directions; from the mountain regions in the north-east and north, from the steppe lands in the west and south, and from the sea approaches in the south-east. In these circumstances the population was bound to be heterogeneous. Small wonder, therefore, that the Biblical story of the building of the Tower of Babel (Gen. xi: 1–9) reflects a picture of ethnic confusion. Nothing approaching an ethnic map of the country is possible prior to the advent of writing, *c.*3,000 BC, although archæology bears abundant witness to the fact that all of Mesopotamia, including the alluvial south, had been settled long before writing could usher in history proper.'

Moving on to the *Cambridge Ancient History* (1970, 3rd edition), the preface to Volume I—which includes 'Prehistory'—states: 'Settled communities presuppose the domestication of animals and the cultivation of crops, landmarks in social evolution which are now believed to have been reached between the tenth and the eighth millennia BC. Behind these achievements lay perhaps more than 40,000 years of human development, if the dates obtained by carbon–14 determination for the Palæolithic Age are reliable. This invaluable aid to the archæologist, which we owe to the American scientist Professor W. F. Libby, is still lacking in precision, but improvements in technique and in the interpretation of results can hardly fail to come in time.'

At least it is honest enough to acknowledge its dependence upon radiocarbon dating, which we now know to be of very dubious reliability. For comments upon Willard Libby's radiocarbon dating method, see for example Rohl (1995, pp.384-389) and chapter 4 of Milton (1997).[5] It could, perhaps, be said also that the *CAH* is now out of date. Its 3rd edition was published in 1970 and an enquiry at Dillon's Bookshop in April 1998 shows that this edition is still current! Any of its statements regarding the dates of prehistoric phenomena are, thus, of dubious value. As regards the matter of civilization being dated by writing it says that, 'There can be little doubt that the only valid criterion for defining the end of the Prehistoric Age is the appearance of writing. In Mesopotamia the earliest writing hitherto discovered comes from Level IVb at Uruk.' [Uruk, or Erech, was an ancient walled city located north-west of Ur in Mesopotamia (Iraq). The Uruk site has been excavated from 1928 onwards by German archæologists. Urban life is said by *Britannica (Micropædia)* to be more fully illustrated at Erech than at any other Mesopotamian city in respect of the time period *c.*3500–2900 BC. The 'Eannatum' referred to below is King Eannatum of Lagash (modern Talloh).]

The implications of this *CAH* quotation are indicated by the following: 'Now if the culture of Uruk Level III was flourishing in Mesopotamia already before 3,100, the beginning of Uruk V can plausibly be dated *c.*3500 BC, for it would not be safe to allow appreciably less than a hundred years on average, for the following four phases: Uruk V, Uruk IV, the interval from the beginning of Uruk III to the contact with Nagada II, the interval from the latter to the First Dynasty in Egypt. On the other hand, this date means that from the beginning of writing in Mesopotamia to the full development it reached under Eannatum, *c.*2500 BC, we have a total of about 1,000 years. This is very much longer than one would have expected and in the absence of evidence to the contrary one is certainly entitled to regard a thousand years as the maximum plausible for the development of writing. This suggests that we should not go much above 3500 BC with Uruk V. And if we also cannot come much lower, then as a rough estimate the date 3500 for the beginning of the Proto-historic period may perhaps be not too far off the mark.'

It seems, therefore, that the *Cambridge Ancient History*, *Britannica* and *Colliers* are agreed that human civilization, at least as defined by the phenomenon of the skill of writing and the establishment of a settled community in Mesopotamia, had occurred between *c.*3500 BC–*c.*3000 BC.

Other authoritative tomes agree with this general view. For example, a fairly recent advertisement by Blackwells for *The Wall Chart of World History* reads, 'Follow 6,000 years of history' (Blackwells Bookshop's List for Christmas, 1989). Rather similarly, *An Encyclopædia of World History* (5th edition, Harrap) states that 'The earliest settlers in Mesopotamia known to the historians were the Sumerians ... beginning not long after 4000 (BC)' and 'The first great civilization of mankind was created by the Sumerians in Lower Mesopotamia. The formation of the basic lines of this culture took place early, in the Protoliterate period (3200–2850 BC).' This is confirmed by the *Oxford Illustrated Encyclopædia* which states, 'By the end of the 4th millennium BC a number of city states had been established by the Sumerians.'—(*i.e. c.*3000 BC). Rather similarly the *Chronology of World History* (Freeman-Grenville, 1978) starts from 3000 BC! *Chronicle of the World* (Burne, 1989, p.36) mentions towns and cities arising *c.*3500 BC in Mesopotamia. These apparently authoritative tomes all infer, therefore, that the whole history of observable civilization on planet Earth, has encompassed a mere six thousand years!

Now, what about the comments of other mainstream media? What about television programmes which are concerned with ancient civilizations? What do their 'experts' say?

Let us now consider Egypt. One of the historians to have hosted a television series on Egypt is John Romer. In his book *Romer's Egypt*, he acknowledges in the preface that his dates for the pre-dynastic and First Dynasty periods are taken from the second edition of the *Cambridge Ancient History*. In one of his early chapters he discusses the usefulness to historians of the famous cemetery at Nagada. Of this he says, 'It could be said that what [Sir Flinders] Petrie ... found at Nagada were the missing links in the long chain that represented the transformation of Egyptian society, joining small centres of tribal cultures to the basic elements of the Dynastic Civilization' (Romer, 1982, p.43). He also states that, 'according to modern estimates, the burials at the Nagada cemetery had been made over a period of some fifteen hundred years, the last having been interred around 3050 BC' (Romer, 1982, p.40). By implication, therefore, Romer's estimate of the earliest primitive tribal existence in Egypt is *c.*4550 BC.

Another television series has been the Channel 4 production *Pharaohs and Kings* featuring David Rohl. The substance of this series has been written up and published in David Rohl's book, *A Test of Time*. David Rohl defines pre-dynastic time as 'the time before the unification of Egypt by King Menes and the beginning of the First Dynasty' (Rohl, 1995, p.14). He dates the First Dynasty between 2920 and 2770 BC (Rohl, 1995, p.14). His objective is to inter-relate the chronologies of Egypt and Israel, so he spends little time on the pre-dynastic factor, but it is instructive to note the correlation between his published dates for the First Dynasty, (2920–2770 BC), with those given by John Romer under the heading 'Archaic', where the variation appears to be between about forty years and a century (*cf.* Rohl, 1995, p.15 with Romer, 1982, p.216). (Romer's dates are earlier than David Rohl's).

It is also interesting to correlate these dates with those given by Mr. T. G. H. James, who for years has been keeper of Egyptian Antiquities at the British Museum. Mr. James states that 'The first truly historical period is that which begins with the invention of writing and it is generally known as the Dynastic Period. It is a period extending from about 3100 BC to 332 BC' (James, 1979, p.37).

It appears therefore, that Messrs. Romer, Rohl and James agree, within a variation of about 150 years, that the First Dynasty period in Egypt commenced *c.*3000 BC and that this event saw the invention of writing—which correlates exactly with the invention of writing in Mesopotamia as specified by the *Encyclopædia Britannica*. (It is worth noting, in passing, that this key event—the invention of writing—is stated by secular historians to have taken place in two acknowledged cradles of civilization a mere 5,000 years ago!).

Before leaving the matter of televised series on ancient civilizations, some of us will remember the then Israeli Foreign Minister, Abba Eban, giving a series entitled *Civilization and the Jews*. The substance of this series was published by Mr. Eban in his book *Heritage*, published in Britain by Weidenfeld and Nicolson in 1985. Whilst Mr. Eban would probably concede that he is not a professional historian, and therefore cannot claim to be an 'expert', it seems reasonable to assume that his text would be acceptable to current historians, and this is indeed implied in his acknowledgements. His book contains a useful statement concerning the origins of human civilization which crystallizes the positions of all of the literature quoted so far. He states: 'There is thus a fairly full picture of the two civilizations, Egypt and Sumer, that flourished in the Near East when Jewish history begins. In Egypt, by the fifth millennium BCE' ... (*i.e.* from 5000–4000 BC) ... 'people were cultivating wheat and barley, herding cattle, building houses, making pottery, weaving baskets and burying their dead in shallow oval graves, along with food and drink, eating and drinking vessels, tools for grinding cosmetics, and other implements that the deceased might need in the life to come. In India, recent evidence suggests domestication of sheep and cattle and cultivation of rice during this same period, if not earlier. And in Mesopotamia (which in ancient Greek meant 'between the rivers') in the fertile alluvial plains of the Tigris and Euphrates, wheat and barley were grown as early as the seventh millennium BCE. Here ancient man made the technological, social and cultural transition from village to empire between 6,000 and 4,300 years ago.' (Eban, 1985, p.8.)

In sum, therefore, where does all of this leave us? It seems fair to say that the secular world itself concedes that the history of human civilizations is not longer than 5,000 years, even though it would argue that more scattered and 'primitive' human existence can be traced back beyond 6,000 years. However, apart from the comment in the *Cambridge Ancient History* which argues for human development from 40,000 years ago, the general admitted consensus is that there is effectively, to re-quote Blackwells, '6,000 years of human history'! We have, therefore, as I see it as a mere amateur (an ex-textile technologist) secular authority for saying that the human story is 6,000 years old. This sounds astonishingly biblical!

Implications of previous sections

In section 1, from the 'facts' of science as suggested by a series of quotes taken from the writings of non-Christian scientists, it appears that the various evolutionary hypotheses are merely hypotheses with virtually no substantive scientific bases.

In section 2, it appears that even secular historians are in fairly specific agreement with the biblical view of the length, to date, of human history.

Why then do we have a problem getting the 'creationist' position accepted by the Church, let alone the media and the average man and woman 'in the street'?

I think that there are possibly three main reasons, *viz.*

The love of mythologies

There seems to be an element in the human mind which loves 'stories' whether they are true or not, and, of late, a number of 20th century mythologies have taken a serious grasp of western culture human minds. If one considers television and films, it can be said that series such as *Star Trek*, *Blake's Seven*, *Star Wars*, *Babylon 5*, *etc.*, have become 'cults'. Now a characteristic of these programmes is that they all envisage an indeterminately long human existence forwards from the present time. The human, or similar, story goes on and on into the future. 'We' simply shift from planet to planet, galaxy to galaxy. 'We' go on endlessly, and, apart from occasional blips, 'we' go on onward and upward! No end of time is envisaged—certainly nothing as terrifying as a time of serious Divine intervention and judgement.

Now the same thing is true 'backwards'. Tolkien's *Silmarillion* and *Lord of the Rings* are cult classics and the latter is the 'Book of the Century'! Many of us have become intrigued by Hobbits, Ents and Wizards. But Tolkien's mythology envisages, as do many others, almost endless 'time' in the past—plenty of time for umpteen different dramas of a humanoid type to have been played out upon the surface of our planet. To insist on one race only, with a mere 6,000-year history, is, frankly, boring! Stifling to the imagination!

It may therefore be that our love of mythologies makes biblical truth unacceptable.

The Anglo-Saxon/Celtic factor

Richard Milton makes a very interesting observation near the end of his recent book. He says, 'Darwinism has never had much appeal for science outside of the English-speaking world' (Milton, 1997, p.277). His comment may not be unrelated to Bagehot's statement, '... of all the nations in the world the English are perhaps the least a nation of pure philosophers' (*Bloomsbury Dictionary of Quotations*, 1987, p.21) and similarly to Lord Mancroft's joke that, 'Cricket is a game the British, not being a spiritual people, had to invent in order to have some concept of eternity' (*Penguin Dictionary of Modern Humorous Quotations*, 1986, p.63).

Of course, one makes this suggestion with appropriate diffidence but is it just possible, is it just conceivable, that we Anglo-Saxon/Celts may not be so very bright? May we be intellectually impoverished? There is an almost total absence of religion except amongst the immigrant groups. Most of the peoples of the world, other than Europeans, have some kind of creed or religion which may involve some faith in a God or in gods ... a Creator or creators. They are either Hindu, or Muslim, or Buddhist, or Taoist, or Sikh, or Jain, or Jewish, or Shinto, or even Christian. As Clifford Longley said recently of the average Britisher in the *Daily Telegraph* (25th September 1998), 'For the vast majority of those now under 35, religion has no effect on their lives whatever. However you measure it, England is now one of the most icily secular countries in the world—perhaps exceeded only by Wales'. It seems that Paul's argument in Romans 1:20 passes British people by, and they just believe without question the evolutionary scenario fed to them by the universities, schools and the media.

A kind of either formalised, or informal, conspiracy exists to preach nothing but evolution when the matter of origins is relevant to any topic. (It is as if all our newspapers, magazines, radio and TV editors have jointly determined to 'know nothing amongst us but Evolution and Darwin sanctified'!). The 'Evolution Weekend' of programmes sponsored during the last weekend of March 1998 by BBC2 is a reminder, as if we needed one, of the love the British media moguls have for 'proving' that man is really an ape. Malcolm Bowden, in his book *Science* vs. *Evolution* comments that, 'With all the evidence that has been presented within this volume,...' (*i.e.* against the validity of evolution theory) '... those who are convinced by it and agree that the theory is adequately disproven, may well wonder why it is still widely accepted and is so frequently referred to (or is implied) in television programmes and the mass media. The answer is that these important channels of communication are completely controlled by ardent evolutionists who simply will not allow a public challenge to the theory.' (Bowden, 1991, p.151.)

Richard Milton (1993, pp.10–11), in the preface of one of his books, speaking of the media and scientific establishment reaction to his previous book, states:—

> 'It seems to me that these intemperate responses betoken more than a squabble between a nosy journalist and a couple of reactionary academics. They raise a number of important questions of general public interest. Who do you have to be to have a voice about scientific research on which large sums of public money are spent? Who *decides* who you have to be? In what forum, or by what mechanism can the voices of dissent ever be heard in science? It is not just outsiders who cannot be heard, it is dissenting members of the scientific professions themselves. In my post bag are letters from biologists who are concerned at the teaching of Darwinism as holy writ and from medical men whose practice has led them to make medical discoveries having a bearing on evolutionary biology. They have sought to publicize these discoveries in journals such as *Nature* but have been universally rejected because their discoveries are anti-Darwinian in implication and hence counter to the ruling ideology in the life sciences. They have appealed to me—a non-scientist—to help them gain publicity. It is worrying to learn that in one of the most civilized countries on Earth, some professional scientists can feel so isolated and ignored that they have to take their case direct to the public via the popular press. Equally, it is depressing to discover that in a country which prides itself on its tolerance, it is impossible to voice scientific dissent without attracting this kind of response from those who perceive themselves to be the guardians of orthodoxy.'

Dr. Duane Gish (1993, pp.18–19), writing about the situation in the U.S.A., comments:—

> 'More than anything, evolutionists fear an open, free, and thorough scientific challenge to evolutionary theory in the public schools. They have learned from their experiences in debates and other open exchanges that evolutionary theory comes off second best when faced with a scientific challenge from well-informed creation scientists. With their tight control of scientific journals and with the humanistic materialist philosophy that dominates the mass media, they feel secure in those areas. The tax-supported public schools, in our pluralistic, democratic society are, however, subject to more democratic forces. A nationwide poll taken by the Associated Press–NBC News Poll in 1981 revealed that 76% of the American people want both creation and evolution taught in public schools, 10% want creation only taught, and only 8% want evolution only taught (6% had no opinion). Evolutionists have reacted vigorously, even viciously, to these threats to their monopolistic control of science and education. They apparently are determined to use whatever means they feel are necessary to blunt and eventually to destroy the efforts of creation scientists to make known the empty rhetoric that makes up evolutionary stories and the nature of the scientific evidence that supports creation.'

Evidently, therefore, the media, whether in Britain or in the U.S.A., are committed to the propagation of evolutionary hypotheses regardless of actual evidence. Their posture is that of the manager who says, 'I have made up my mind. Do not blind me with facts!' Or, perhaps, is there yet another alternative?

The 'Table Leg' Factor

As students of the second World War will know, on July 20th 1944 Colonel Count von Stauffenberg attempted to kill Adolf Hitler during a conference with a bomb carried in the Colonel's briefcase. When Stauffenberg left the conference room, having primed the detonator, another officer moved the briefcase from its original position under the conference table to a position which put a heavy table support between the bomb and Hitler. When at 12.42pm the bomb exploded, several German officers were killed. Hitler was badly shaken but not severely injured (Shirer, 1960-1974, pp.1048-1053). As a result of Hitler's survival, the war in Europe went on for another nine months, killing possibly another two million people. Of course, it could be argued that had Hitler been killed in World War I, as he might easily have been, as he was a soldier in the trenches for most of the time, about fifty million people's lives might have been spared. It could be further argued that if a Serbian conspirator had failed to kill Archduke Ferdinand, there might not have been a World War I, thus sparing a few more million lives, not to mention the material damage, the crippling of economies, the massive disruption of normal daily life, *etc.*

These kinds of events, the table leg, the actions of a few conspirators, are usually considered by theists to be factors permitted in the providence of God. Christians sometimes use the term 'The Permissive Will of God'. Theologians try to discover the implications of the horrendous historical events permitted by God, in order to explain, if explanation is possible, why a good God permits evil to stalk the earth almost without remit. In the case of the World Wars I and II, many conservative Christian theologians would probably argue that God was judging a morally bankrupt world which had resisted biblical Christianity for centuries and was also bringing back His people, Israel, to the Land, where they have to be for the ancient prophecies to be fulfilled. Obviously this is one explanation. There are, no doubt, others varying according to one's faith and eschatology.

Now in the debate concerning the nature of origins, the fact that the largely post-Christian Anglo-Saxon world is evolutionist, must be within the permission of God. If God is the ultimate 'Boss', this must be so, otherwise He would stop it. Therefore those of us who adhere to the Christian faith, and are also short-time period 'creationists', must see in the present situation the fulfilment of biblical comments and predictions. Paul's comments in 2 Thessalonians 2:9–12; 2 Timothy 3:1–9; Romans 1:18–32; 1 Corinthians 1:18–

29, to select just a few, seem relevant to the current situation. The apostle Peter's comments in 2 Peter 2 and 3 appear to be equally appropriate. Jesus's query, 'However, when the Son of Man comes, will he find faith on the earth?' (Luke 18:8, NIV), seems to confirm the apostolic view that He won't find very much. Matthew Henry (1960, p.279) says of this verse, 'The question implies a strong negation: No, He will not; He Himself foresees it.' In the event therefore, if the arrival of the 2nd Millennium AD's completion sees a 'Christendom' which has become a virtual 'Darwindom', presumably the relatively few Christians remaining, the 'remnant', must see the situation as the Divinely permitted final apostasy which Jesus and the apostles definitely state to be the precursor to the Second Advent.

If the above is true, where does it leave the creationist remnant, (a remnant of a remnant!)? [6] Well, presumably doing what the Christian remnant throughout the ages has always done—seeking to try, under God, to communicate the Gospel. If, as Ken Ham believes, we need to take Paul's approach as described in his sermon on Mars Hill (Acts 17), then creationist activities are relevant and should be pursued. Certainly it seems highly probable that a thoroughly biblical stance by the Church would be more God-honouring and effective than the semi-liberal stance adopted as a result of the extensive permeation of theistic-evolutionism. However, it is difficult to be very optimistic about the future, except in respect of the eventual future. The Messiah and the apostles seemed to be rather pessimistic about the later stages of the church age. If, from the signs of the times, we feel ourselves to be in these later stages, we would be foolhardy to be optimistic ourselves. World conversion, or even extensive conversion, as a result of a general intellectual conviction of the rightness of creationism, seems very unlikely to occur. Therefore, the ministry of creation science will almost certainly remain that of a ministry to a remnant.

In closing these 'observations', I have to say that the modern-day Church has probably been permeated by theistic evolutionism as a result of its absolutely staggering ignorance of the historicist explanation of Judæo-Christian eschatology. If the contents of the works of such as Dr. Thomas Newton (one time Bishop of Bristol), The Rev. E. B. Elliott, and particularly those of Dr. H. Grattan Guiness (Newton, 1776; Elliott, 1862; Guiness, 1888), had been taken seriously, then the implications of prophecy for the present State of Israel would have raised confidence in the accuracy of Scripture. Church members, being fortified by their observation of prophetic fulfilment, would have been much more inclined to believe Scripture rather than scientists. After all, Isaiah pronounced the second regathering of Israel (Isaiah 11:11) some 2,700 years ago. Scientists cannot even predict the weather very accurately from week to week!

References and notes

1 A 'Fact', according to the *New Collins Dictionary*, (1987), is: i. An event or thing known to have happened or existed; ii. A truth verifiable from experience or observation.

2 The quotations in this section are taken from Snelling (1990). This book offers 128 quotations from 'leading authorities'. A rather similar series is offered by Gish (1993) in his chapter 'Out of their own mouths' which has 64 quotations.

3 Available from the Chichester Christian Fellowship, Bognor Regis, PO21 1QG.

4. For a review of Ptolemy's *A Imagest* on astronomic calculation of dates see, for example, Guiness (1888, pp.395–403).

5. As an illustration of David Rohl's views in brief, the following are quotes from his recent book (1998). He says, 'All we can do is to divide the archæological artefacts into eras and assign a vague number of centuries to each of those eras based on relative radio-carbon dates. Absolute dates obtained by using the radio-carbon method … are simply not viable as a means of accurate dating and few historians are currently prepared to accept them.' (p.24.) Also, 'As I have hinted, even relative radio-carbon chronology is, in truth, too blunt a tool to help very much, the error ranges being too wide to provide the accurate dating needed.' (p.26.)

6. Christians are obviously a remnant of the world's population. As a great number of this remnant are, apparently, theistic evolutionists, creationists are a remnant of a remnant.

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The Ambitions, Beliefs and Concepts of Charles Darwin : 1

Leonard Loose

AS A TEENAGER, I was convinced of three things. First, I was convinced that smoking was bad. Now at that time, smoking was done freely. Most young people tried smoking a cigarette at one time or another. In those days, few if any persons, knew anything about the reasons for not smoking. An interesting, but unconvincing reason, I think came from my grandmother who said: 'If God had meant us to smoke, he would have put chimneys in our heads!'

Nevertheless, without any scientific information whatsoever to give guidance on this matter, I was of the opinion that smoking cigarettes did not do any good. So I never smoked, except on one occasion with my cousin, at the age of 12. We had found an old clay pipe on the village green. We had also picked up a length of binder twine, a coarse string. We cut the twine into short lengths, loosened the individual fibres and pressed them into the pipe. With a match, the tobacco substitute was soon smouldering. We took a couple of draws at it. The smoke was horrible and sickening. So from that day to this—never again!

The second thing I was convinced about as a young teenager, was that sex outside marriage is wrong. Again I could give no reason but the conviction was there. Of course promiscuous sexual relations were not quite so openly and commonly practised then as now. But somehow or other I had the idea, opinion, conviction—call it what you will—that these things were wrong.

In the late teens came the third matter, about which I was equally convinced. It was that the Bible is true, while on the contrary, the theory of evolution is not true. At that time I could give no reasons for these views. I must emphasise that.

Today the situation is entirely changed. Sixty years of human experience on the one hand and of wide-ranging medical and scientific research on the other, have provided substantial and highly relevant factual evidence with regard to smoking, promiscuity and the theory of evolution. This factual evidence confirms the views that the consequences of the smoking habit are always harmful and often fatal to human life, that promiscuous sexual relations endanger life and place healthy, stable family relationships in jeopardy and that nature is not evolutionary.

For example, the origin of several serious, often fatal, lung disorders has been traced to complex toxic chemicals in tobacco smoke. Every packet of cigarettes carries a health warning accordingly. Similarly on the matter of the promiscuous society, the facts are showing that it is bad. In the long run the consequences are disastrous. Aids and cervical cancer at the physiological level; nervous and behavioural disorders (sometimes of criminal proportions) arising from the intense stresses of broken personal relationships are examples of such disasters. Promiscuity offers short-lived pleasures which are followed by severe physical and mental suffering, injury, troubles which are costly to alleviate and sometimes fatal. These facts of life are bringing such conviction to many in these days that they are turning away from the permissive society.

Evolution, Charles Darwin and the Bible

So what about evolution? It is becoming increasingly clear that science, in fact, is showing that the process of evolution is highly questionable—*e.g.* (1) *Evolution—A Theory In Crisis*, Michael Denton, (2) *The Facts of Life: Shattering the Myth of Darwinism*, Richard Milton. Every living organism is determined and controlled by information contained in its genetic constitution. In the course of its lifetime this information is subject to change. The number and consequences of the changes that lead to misinformation in its essence far exceed the number and consequences of changes that enhance its performance as a living thing. The overall trend brings about a degradation of species. A *status quo* in nature is maintained only by the constant and rigorous attention of intelligent and experienced plant and animal breeders. It is common knowledge to farmers and gardeners that their stocks deteriorate in quality over the years. These stocks must be discarded and replaced by new stock that have been bred not for numbers but for preservation of their kind. Darwin himself acknowledged the fact that living things, passing out of human care and control, inevitably deteriorate. 'All highly improved races if neglected or not subjected to incessant selection soon degenerate'. 'It may even be doubted whether the variations of any of our domestic plants or animals, if they were allowed to struggle together in the same manner as beings in a state of nature, could be kept up for half a dozen generations'. Nature is not going in the way that Darwin said it is. However, it must be said, and kept in mind, that the majority of biologists in particular and philosophers, sociologists and theologians in general, still firmly believe in an evolutionary universe. Had we time to investigate the scientific implications of the theory of evolution we would understand that the evolution of living things as they are now constituted, is really impossible. *Darwin's Black Box, The Biochemical Challenge to Evolution*, Michael J. Behe (1996).

The Bible that describes the glory of the original creation, the Bible that takes into account the corruption of the entire natural kingdom, the Bible that treats this corruption as the consequence of the human loss of trust in God is being corroborated. Its veracity will be increasingly substantiated as science brings to light new insights into the way nature works.

Darwin is very highly respected among scientists. He is reputed to have made the greatest contribution to human thinking of any man in the history of mankind. He is praised for the way he used his powers, displaying a genius far beyond all other thinkers of his day and age. The claim is also made that Darwin brought about a revolution in the way men think about themselves. This claim is fully justified. In the course of time the Darwinian ideas changed the attitude of mankind toward God, toward themselves, toward the Bible and toward the universe. By any standards this is a very big achievement.

Inevitably the reality and significance of this revolution of thought brought about by Darwin's theory of evolution came into sharp focus at the start of my teaching career. It happened in this way. The main subjects assigned to me were biology and religious instruction. It could be said I used to talk about 'sweet peace' in religious education, and 'sweet peas' in biology! It was necessary to set the great facts of the Bible alongside biological principles. I was privileged to have some lively times of pupil questioning. The modern scientific concepts and the liberal religious ideas were raised and vigorously discussed by the sixth form. Evolutionary theory inevitably, and quite rightly, frequently came up for wide-ranging consideration. So on both accounts because of the importance of the Bible in religious education and the significance of the theory of evolution in the teaching of biology, I was continually stimulated to look deeply into these things. It was obligatory to ascertain as fully, and as accurately, as possible the basis of these wide-ranging and often conflicting views. What are the biblical facts? What are the scientific facts? Every pupil has the right to know, and, as far as possible, to understand all the relevant facts in order that he or she may make his or her own informed judgment on these important matters.

This revolution in human thinking that Charles Darwin set in motion has spread far and wide into every branch of human society. It has also penetrated deeply into the individual mind. For example: I went into a religious instruction class one day. I was deputising for an absent colleague. It was the first form. They had only been a month or two in the school. I did not know any of them. I was not regularly teaching the first forms that year. To make some rapport with the class, and to involve the pupils I decided to ask a few questions. As the subject timetabled was religious instruction, the questions were such as, Do any of you go to Sunday School? Do you enjoy it? What about Bible reading? Do any of you read it regularly? What scheme of reading do you follow? About ten minutes had passed. Some of the pupils were talking quite freely. Mentioning the Bible prompted someone among them, at twelve years old, to say, 'Sir, we've come from monkeys, we've evolved. You can't take what the Bible says'. In the questions that had been put to the class no hint had been given to stimulate such a comment. It was customary to mention the Bible in religious instruction lessons. It was a spontaneous reaction on the part of the pupil.

Or again, take this example. A few years ago I was visiting my son. A pastor from a nearby church called at the house. After the usual introductions were over, we chatted together about our respective interests. Within five minutes he was applauding Darwin for the remarkable insights he had given us. He was rather surprised that I did not share in his admiration of Darwinian ideas. The point to be made here is that Darwinian teaching is having a tremendous effect upon the thinking of men in all walks of life. As a recent survey has shown, some 38% of students consider that their belief in the theory of evolution precludes them from adopting a religious basis for their lives.

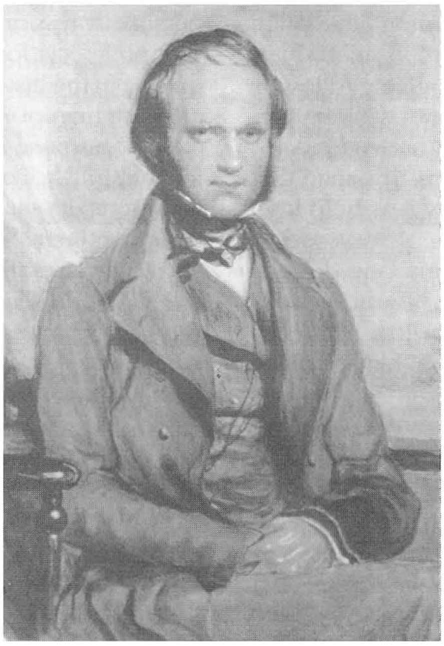
At Home

So now, what about this remarkable man Charles Darwin? He was born in 1809. Sadly, at the age of 8, he lost his mother. His eldest sister brought him up and mothered him, apparently very well. He looked upon her as a mother, and confided in her. His father was a physician, a distinguished physician. He earned a great respect. His success in healing the sick owed much to his ability to communicate to his patients the confidence that if they did what he told them they would get well. He had a remarkable charisma in sharing with others his optimism for their healing. As Charles put it, he 'possessed extraordinary powers of winning confidence'. He became a very wealthy man, because he could command the attention of, and the contributions from, the wealthy, who paid for the services he gave them. Darwin's grandfather, Erasmus Darwin, was also a physician. He was reputed to be the finest of his time. He was invited to be physician to the king but he turned it down. He chose to go his own way. Erasmus was also a man of great influence in other fields of learning. He was an eminent naturalist, a leader in social reform, and a best-selling poet. He moved in the highest intellectual circles of his time. Charles Darwin was born into this family well known for its outstanding intellectual powers, a family high in public esteem. There is no doubt whatsoever that in due course, in his own right, Charles displayed the attributes of a genius. 'Industry was half his genius'. He worked day in and day out, year in and year out in developing and communicating the ideas he had. All who knew him thought highly of this dedication which, in spite of chronic ill-health, carried him on to reach his self-appointed goal. This unique goal was to provide a comprehensive view of the natural kingdom in terms of physical and chemical laws alone. In such terms nature—nature including man—was being seen to be a completely self-organising, self-sufficient, self-revealing system, requiring no action or intervention by a Creator God. For Charles Darwin, God and the Bible became irrelevant.

Darwin then, had been born into a gifted and famous family. But there is one other thing. Darwin's grandfather was, it was said, a weak Deist. That is to say, he thought there might be a God but he owed no allegiance to Him. On this matter Coleridge the poet was quite forthright and said that Erasmus was an atheist. Darwin's father also was an unbeliever, a decided unbeliever. Charles indicated that his father equated belief in God with deficient or defective intelligence. For he attributed to his father the remark that 'so clear-sighted a woman could not be a believer'. Darwin was born into a home where unbelief reigned.

At Shrewsbury and Edinburgh

Now let us quickly follow through certain formative events and relationships in his educational career. It was not until 1831 that Darwin took charge of his own life. Until that time his father, a man of decided opinion, a man who exercised his authority in the home, had decided what his young son Charles should do. What was he doing in the intervening years? At the age of 8 in 1817 he was sent to a school in Shrewsbury as a day scholar. In the next year he became a boarder and remained a pupil there until 1825. Reflecting on that time Darwin later said that no education could possibly be worse than that which he had received at that school. On his part he got into trouble because he did not diligently attend to his set studies. Darwin was already keen on nature. He loved to go into the countryside to search for beetles and having found them to understand what they were doing. He liked experimenting with chemicals, but he did not like the classics. He did not take to Greek and Latin. For such reasons he often passed through difficult and unpleasant times at school. He was considered by his masters and his father to be a likable, but very ordinary, boy. However, when Charles was 16 his father decided that he should leave school and continue his education at the university. So in 1825 he went to Edinburgh University. His father sent him there to train as a doctor. It was customary then for a son to follow the profession, trade, or business of his father. The profession of the father was the one the son should follow. So Charles, along with his elder brother, Erasmus, went to Edinburgh University to study medicine. Darwin was there two years. He reports that the lectures were dull. He found little pleasure in them. He thought they were very poor in their presentation of information. The practical side of his medical training, involved his attendance at the operating theatre. The surgical techniques were very primitive and involved the patients in much more suffering than comes in current practices. On two occasions Darwin rushed out when the operation got going. In due course he let it be known that he did not want to be a doctor. At the same time he found friends and other academics, geologists and zoologists in the university, whose studies were more attractive to him than medicine. He talked with them and learned much about his favoured subjects. Particularly, he learnt from one of the lecturers about the new theory that Lamarck, a Frenchman, had propounded on evolution.


Darwin at the age of 30

At the age of 18, Darwin came to understand that his father intended endowing him with a goodly sum, (modern equivalent £1–2 million) so he would be well provided for. In view of this Charles saw to it that his father was convinced of his deep aversion to becoming a doctor.

At Cambridge

Now what should the father do with the son who would not take up medicine as a career, after the tradition of the family? Charles's father was of the firm opinion that his son must have a profession. Very surprisingly, unbeliever though he was, his father decided that Charles must go to Cambridge University, and at Cambridge he would study divinity. Having completed the course in divinity he would then be qualified to become a country clergyman. His honourable profession was to be that of the clergyman.

So, as dad said, Charles, the son, went to Cambridge in 1827. Now at Cambridge he soon began to make his mark. However, he wrote of Cambridge in those early days, as he had done of school and of Edinburgh medical school. He described it as being stupid. In this, his preeminently intellectual approach was again showing up. He settled down to begin his divinity studies under the guidance of the influential academic elite of the country who were gathered there. Among his prescribed studies were the works of an outstanding Christian writer of the time, by the name of Paley. Paley had written two important books which, at that time, became the standard works in the divinity course in the University of Cambridge. One was entitled *Natural Theology*, and the other was *Evidences of Christianity*. This distinguished author William Paley, by impressive illustrations from natural history, extensively developed the theme that the creation displays to us many facets of the glory of God, and of the wisdom of God.

The form and organisation of all living things are characterised by order, and by adaptation to purpose. The form of the limbs and feet of the horse enable it to run. The shapes of the fins are fashioned for the fish to swim. The structure and placement of the feathers on the wings equip the bird to fly. This principle of the relatedness of form, function and design is equally well illustrated in insects, shellfish, indeed in all created life forms. Similarly, among the lovely flowers of the earth, some are designed for the wind to carry the pollen long distances from flower to flower. Others are designed for the bee to come, collect, and carry the pollen from one flower to another. These floral structures are as effectively equipped to receive pollen from the wind or the bee respectively, as, in the first place, they are aptly contrived to give it to the wind or the bee. The hallmark of every living thing is the formal commitment to purpose. If there is design, there must be a designer. If there is a designer, an architect, he must be intelligent. The marvellous, intricate and timely workings of nature show that the Creator must be very intelligent. As the Bible says, so Paley affirmed. The universe is the expression of the wisdom and the power of the Creator God. Darwin said he enjoyed the Paleyan exposition of nature in terms of the Divine intelligence. He liked the Paleyan arguments, and he knew them almost by heart. In Darwin's own words: 'The logic of the book, and as I may add of his Natural Theology gave me as much delight as did Euclid'.

Early in his career at Cambridge, Darwin became friendly with the Professor of Botany, Henslow by name. Professor Henslow was also a 'reverend gentleman'. Most of the academic men in those days were ordained men approved by the church to take a leading role in the teaching ministry of the university. Professor Henslow spotted Darwin's intellectual ability, and his love of nature, and took him under his wing. Charles flourished there. A friendly relationship was soon established. Darwin used to go for walks with him on most days, and often dined with the Professor. On such occasions Darwin met other professors, and visiting lecturers and attentively followed their learned discussions. So he became well known among the leaders of the academic society at that time. He records: 'I was called by some of the dons "the man that walks with Henslow"'. Professor Henslow was held high in the esteem of Darwin who wrote of him: 'He was deeply religious and so orthodox that he told me one day, he should be grieved if a single word in the 39 Articles were altered'. Of the character of Professor Henslow he said: 'I never saw a man who thought so little about himself or his own concerns'.

In due course Darwin took his exams and passed. At that time he said he accepted the Bible as the Word of God. He was quite prepared to assume the responsibilities of a country clergyman. This respect for the Bible, this high view of scripture—the then prevailing orthodox view—is expressed in a letter he wrote to a student friend W. D. Fox in 1829. Fox had been bereaved of his sister. Darwin wrote to comfort his friend. He was full of sympathy for his sorrowing friend, but he added there was really no need for his sympathy, because his friend knew where to find all the sympathy he required—in the Bible. In Darwin's own words: 'And after so pure and holy a comfort as the Bible affords I am equally assured how useless the sympathy of all friends must appear'. Obviously at that time he had respect for the Bible and commended its use to other people.

The friendliness and kindness of Darwin were outstanding. He was a humble man. Although he took quick exception to what he saw as errors in human thinking, and though he often forthrightly made his objections known, he did not run down people personally. As one, Mellish, paying tribute to Darwin in 1883 wrote 'I think he was the only man I ever knew against whom I never heard a word said'. One of Darwin's shipmates on the *Beagle* who later became Admiral Sir James Sullivan remarked he was 'never known ... to say one unkind or hasty word of, or to, anyone'. Darwin was everywhere well received and well spoken of. The prospects for a career in the Church looked good in 1831.

Prospective naturalist and explorer

A great step was now taken. At the age of 22 he began to take over the running of his own life. He was so highly regarded by Professor Henslow that he put Darwin's name forward, instead of his own, to go on the prospective voyage of H.M.S *Beagle* as the official naturalist on this scientific world expedition. He would of course be paid and have a rank of considerable importance. At first his father objected to Darwin taking up the offer. But Darwin, as many young folk do, persuaded his uncle to appeal to his father to let him go. His father accepted his uncle's advocacy. Darwin received his father's permission to become a naturalist and to commit himself to a voyage of scientific exploration. By this appointment he was placed in a unique position in the scientific world. No one in quite this way had ever toured the world as a scientist to be personally responsible for such an extensive investigation. The prospects for Darwin were as exciting as they were unique in the history of science and exploration. Here was a young man of 22, going round the whole world for the explicit purpose of recording in collected specimens and in writing all he could find out about nature—its mountains, its deserts, its seas, the things in the seas, the islands, the large continents—to explore them all. In the event these exciting explorations continued for five years.

Meanwhile Darwin's entry into the Church of England was in abeyance.

Books that made Charles think

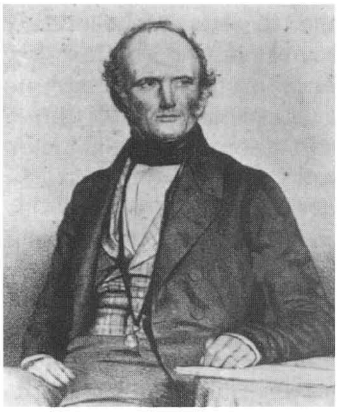
Any book is very important in the hands of a young person. Books certainly played a great part in the life of Charles Darwin. We have seen that as a divinity student he had given attention to, and had been impressed by, Paley's *Evidences of Christianity*, his *Natural Theology* and the Bible. Yet three other books came his way. These further three books, Darwin fully acknowledged, profoundly and permanently influenced the basis of his thinking and the course of his life. Their influence was so powerful that, becoming convinced of the concepts they advocated, he repudiated completely the works of Paley and the Bible. Two of these books he read while still at Cambridge. The third he read while on the voyage of the *Beagle.*

The first of these books then, was J. F. W. Herschel's *A Preliminary Discourse on the Study of Natural Philosophy.* Herschel, who discovered the planet Uranus, was an astronomer at Cambridge University. Darwin said that the reading of his book put a burning zeal within him to add to science something that had not been there before. As we now know that contribution was to be his theory of evolution by natural selection.

The second book was by the outstanding German explorer and writer Humboldt. The book was a *Personal Narrative of Travels to the Equinoctial Regions of the New Continent,* describing particularly what had been seen of scientific interest. Darwin having read and re-read the book described its author as 'the greatest scientific traveller who had ever lived'. Humboldt's ambition was to devise a unified account of the whole of the physical universe. The realisation that there might be such a theory later motivated Darwin to develop his theory of evolution.

Darwin wrote: 'I never forget that my whole course of life is due to having read and re-read as a youth his [Humboldt's] *Personal Narrative*'. Thus, the burning zeal fired by Herschel in the heart of the young Darwin was by Humboldt directed towards the ultimate goal of explaining the development of matter into the universe as we know it. With this aspiration stirring deeply within him Darwin set out on the world voyage of exploration. What wonderful possibilities were opening up for an intelligent and ambitious youth!

The third book that, perhaps more than any other, profoundly influenced the thinking of young Darwin was *The Principles of Geology*. Its author was the up-and-coming lawyer turned geologist, Charles Lyell. This book was written on the basis of completely new pre-suppositions concerning the history of the earth. These new pre-suppositions, adopted as the governing principles of interpretation, related to time and process. Hitherto the biblical account of the origin and history of the earth had determined the basis of the interpretation of the existing features seen in the study of the structure of the rocks. This orthodox biblical interpretation reckoned on a young earth and the results of catastrophe. These two major events in earth history, each of short duration but of universal consequences, were the original creation and the catastrophe of a global flood. These events involved processes that until that time had provided the key to understanding the condition of the earth's crust and of life upon it. Lyell attributed to these principles minimal influences. He discarded them in favour of immense periods of time and of slow steady processes acting throughout the long ages of earth history, the principle of gradualism. The book vigorously advocated a uniformitarian approach to, and explanation of, the formation of the rocks, thereby largely excluding any contribution by catastrophe. The forces that we now see in work in nature, forces that the scientist can measure; and measuring inter-relate; and inter-relating also explain; and explaining assert that they are the same forces that have always been at work on the earth. This view, in its well-known summary asserts, 'The present is the key to the past'.



Charles Lyell

This new bold stance of a scientist obviously presented a serious challenge to the accuracy and so to the authority of the Bible. In fact, in private Lyell was keen to eliminate the influence of the Bible from scientific thinking. He decided the best way to do this was to ignore the biblical issue and rather by repeatedly and convincingly stating the facts of geology persuade the public of the truth of his teaching about the history of the world of living things. A copy of Lyell's book, first published in 1830, was given by Professor Henslow to Charles Darwin to take with him on the voyage beginning in 1831.

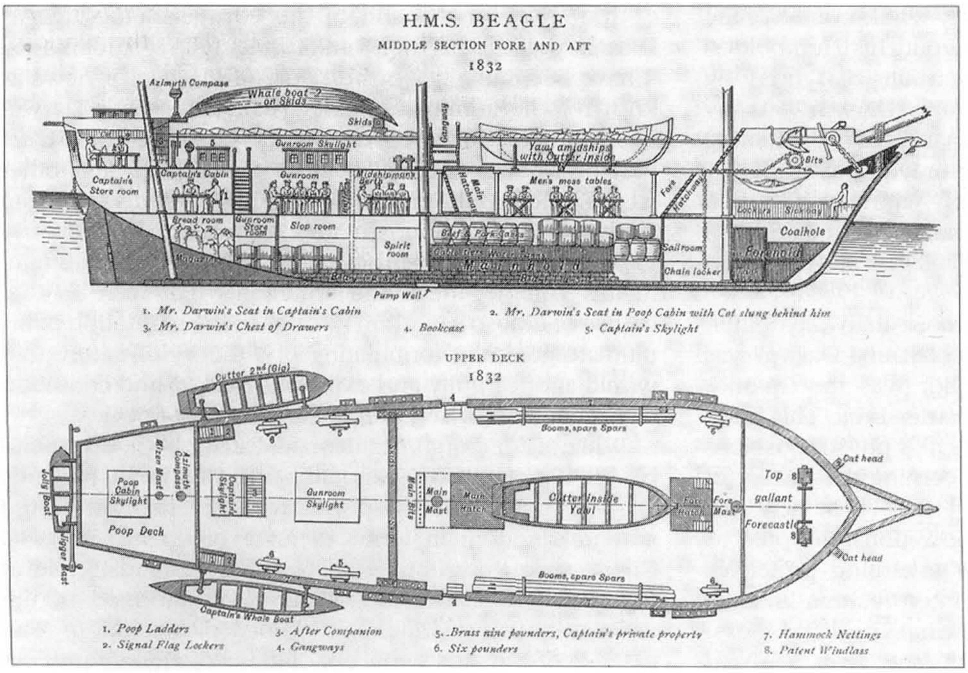
In 1835, near the end of the voyage of the *Beagle*, Darwin wrote to his friend and former fellow-student Fox: 'I have become a zealous disciple of Mr. Lyell's views as known in his admirable book'. Years later, when Darwin had begun to publish his own works he wrote '... the chief part of whatever scientific merit this Journal and other works of the Author may possess, has been derived from studying the well-known and admirable *Principles of Geology*'. When Darwin set sail in 1831 he took with him, in this volume, ideas and arguments that were in due course of time to carry him through to the realisation of his ultimate goal, the formulating of a theory of nature that would at once unify and explain the origin and condition of every extant living thing, 'the Origin of Species'.

While at Edinburgh, Charles had read the book *Zoonomia* by his distinguished grandfather. In this book Erasmus Darwin had set out a speculative interpretation of the natural kingdom in terms of an evolutionary process. Charles was very impressed by what he read. While at Edinburgh he had also become well informed of the French naturalist Lamarck's theory of evolution. The essence of Lamarck's concept of the evolutionary process is that characteristics newly acquired in the life of the parents are handed on to the offspring. Included among the active causes of the origin and development of these new characteristics was the principle of necessity. If a new characteristic was useful to the organism, the characteristic survived. If it was not useful, it disappeared from the species. Although Darwin had not at first seriously entertained these new ideas, explanatory of the changing and improving forms of living things, the inklings of such concepts were in his mind when he embarked upon his epic voyage.

Thus the burning zeal to contribute something new to science fired by Herschel in the heart of the student Darwin; the kindled aspiration directed by Humboldt towards accounting for the origin, development and constitution of the natural kingdom; the fire fuelled by the revolutionary principles powerfully advocated by Lyell, together with the concept of evolutionary progress; all set in a learned society in which the scientific approach to the study of the universe was enjoying a rapidly growing prestige, blazed a trail for Charles Darwin into a new dimension and intensity of thought. But what became of his career as a country clergyman?

Life on board H.M.S. *Beagle*

In addition to his appointment to the key role of naturalist on the voyage of H.M.S *Beagle*, a voyage expressly planned for the purpose of scientific exploration, Darwin was also chosen by the captain of the *Beagle* because of his suitability to be his young gentleman companion. Captain Fitzroy was of noble birth and commanding presence. He was orthodox in his Christian beliefs and puritanical in his way of life. The prospective country clergyman had the makings of an ideal companion for the captain on the long voyage. Darwin shared his quarters and high status on the ship. As the years passed, five in all; as Darwin inclined more and more to Lyell's views; as Darwin saw for himself the massive geological



formations of the Andes and the rich variations in the many new and beautiful forms of life in the tropics; he and Fitzroy often found themselves at variance on the factual significance of the biblical account of the Creation and the Flood. Darwin was not then abandoning the value of the Bible in matters of religion and morals. He was beginning to doubt its adequacy for scientific purposes. The captain believed the Bible to be God-given. It must therefore be true in every way. Controversy was hardly avoidable.

Fitzroy as Admiral in 1865

Captain Fitzroy ruled his ship with iron discipline. If anyone said or did anything that appeared to contradict an order he had given, the offender was immediately put under restriction, walking the deck for hours perhaps, in punishment. The captain was also very hot tempered. The peaceable Darwin found the tension and stress these outbursts of temper generated, unbearable. He left the captain's cabin to be in the more congenial society of the officers' mess. But biblical issues were not left behind in the captain's cabin. Rather, more realistic and immediate challenges were raised at the personal level.

Among the officers was one James Sullivan who later became an Admiral of the British Navy. He was a committed Christian also. He and Darwin used to talk together. Now one thing that made a life-long impression on Darwin was the pathetic depravity of the savages he met. When he first saw the savages, naked, hardly able to put words together, and incapable of counting beyond the number four, he was tremendously amazed and made to think. Darwin wrote of this occasion 'But I have seen nothing which more completely astonished me than the first sight of a savage ... inconceivably wild ... standing on a rock he uttered tones and made gesticulations ... the cries of domestic animals are far more intelligible'. Darwin's immediate response was to ask questions such as: Why are they in this pitiable state? Why are they so backward compared with the white people of Great Britain? On the other hand the response of Sullivan was to say that if the savages heard the gospel of Jesus Christ it would change them as it had changed so many white people. Reporting on these conversations Sullivan wrote: 'I had always replied that I did not believe any human beings existed too low to comprehend the simple message of the Gospel of Christ'. Indeed, some 35 years later, Charles Darwin admitted to Sir James that he had been wrong and Sir James right. 'The progress of the Fuegians is wonderful, and had it not occurred would have been quite incredible'. Again Darwin wrote: 'I certainly should have predicted that not all the missionaries in the world could have done what has been done'. These real life situations made a deep impact on the mind of Darwin. While on the voyage of the *Beagle* he was stimulated to think about the Bible, the sinful state of man, and the power of God, as he was stirred to think about the beauties and varieties of life around him and the way nature worked to make them so.

Here was cause enough for conflict within the young prospective clergyman and the erudite naturalist. Divine revelation and human reason were becoming competitive sources of human knowledge. The findings of scientific observations and experiments within the natural kingdom were to be set alongside biblical and historical affirmations.

This global voyage took him as a naturalist into a collector's paradise. Darwin enjoyed this immensely. He wrote 'Nobody could possibly be better fitted for collecting than I am ...'. For five years he was gathering information. This information was recorded in detailed written accounts of his careful observations and as preserved specimens of plants, animals, and fossils. 'I took much pains', he adds, 'in describing carefully and vividly all that I had seen'. To make the collections, Darwin took long rides into the countryside, or climbed into the mountains, or explored the seashore for weeks on end. When he finally returned to Plymouth he had amassed so many written records, and so many specimens that naturalists were kept busy for years looking into, and identifying the wonders of these evidences of life as

Darwin had seen it in the mountains, on the plains, upon the deserts, in the seas and about the islands particularly of the large South American continent. Moreover in these years he had been thinking deeply. He aspired to writing vivid accounts of the many botanical, zoological and geological discoveries made on his great explorations. Yet, however highly he prized the collections of biological specimens he had built up, he cherished more the new ideas that were rising in his mind as the springs of speculative theorising were now running so strongly within him.

The return to Cambridge

So he came back from 'life on board' which he had found 'so very comfortable and quiet', and settled again in Cambridge. He came back to the climate of the orthodox views of the Church. He came back to feel the winds of change blowing through the thinking in the scientific world. He came back to consider what he was going to do with all his acquired scientific knowledge, specimens and ideas. In these years he faced a momentous crisis. What should he do with his life? What should he believe? Big questions pressed upon him. A country parson? A naturalist? The Paleyan view of the natural world? Lyellian geology? A working theory of evolution? Should he commit himself wholly to the implications of scientific observation? Could he any longer accept biblical Christianity?

The outcome of his intense review of all the possibilities open to him career-wise and of his thorough examination of the bases of what he knew and believed was paradoxically a position of unbelief. He became practically an atheist or an agnostic as Darwin acknowledged himself to be.

The Bible does not make sense

What he has written about the way he considered the Bible is very revealing. He wrote 'I tried to invent ways of making sense of the Bible'. That was his method, to invent a way of creating an understanding. He did not succeed in his attempt to invent for himself an intellectually satisfying explanation of the Bible. Ill-advisedly, Darwin was trying by his own wisdom to understand God, and what God had said and done. He could not make sense of God, the Bible, Creation and the world as it now is. Paul long ago wrote to the Christians in Corinth '... in the wisdom of God the world through its wisdom did not know him ...'.

Also at that time the influence of the destructive biblical criticism was coming into England from Germany. Of course these ideas soon reached Cambridge. Darwin was in no state of mind to turn a deaf ear to these new opinions. Rather they matched the recently espoused views of Lyell, who, for scientific reasons, raised doubts about the historicity of the Old Testament. Darwin received a further push toward unbelief.

Suffering and God are incompatible

Moreover, he was very sensitive to suffering. He did not like to see men or animals suffering. He thought deeply about the significance of pain. On his travels (as formerly in hospital) he had seen men and animals suffering severely. We are all aware of suffering in the world of nature. Tennyson described it as 'Nature red in tooth and claw'. Darwin examined the significance of the Christian claim that God is the maker of heaven and earth and He is kind. He found the concept of a benevolent God who has allowed and at times actually caused the suffering of living things repugnant to his mind. His powerful intellect worked on this response. If God were really God there could be no suffering. But there is immense suffering in man and in nature. No one can deny it. Therefore God cannot be active in, nor in control of, the natural kingdom. Darwin did not accept or deny that God might have started the universe going. He took the view that God is not now at work in nature. To understand nature we must therefore look elsewhere than to God and the Bible.

Science and the truth about nature

Summarising then, by 1839 at the age of 30, he had come to the view that God is not responsible for the contemporary constitution and operations of nature. God is not at work in nature. Nature is atheistic. Nature is to be seen as a self-sufficient, self-improving, self-regulating system of matter. Some matter is inanimate. Some is animate. The animate had come from the inanimate. The living matter is endowed with, and fully integrated in, systems of identifiable forces that operate under fundamental laws. The natural kingdom may be comprehensively explored. By observation and experiment all its secrets will be disclosed. On the basis of the evidence that had already come to light by observation and experiment, Darwin ascribed to nature the capacity to change, diversify and improve. Nature is inherently evolutionary. Darwin also ascribed to nature a self-regulating system whereby changes profitable to the living organism are preserved and unprofitable changes are eliminated. This self-regulating action Darwin called Natural Selection.

By this time Darwin had proceeded further with his conclusions. The Old Testament was not only incomprehensible, it is false. Likewise, not only is the New Testament unintelligible, its authors were naïve and credulous beyond our comprehension. There he made a great blunder. Darwin looked at the Bible. He did not understand it. He asked himself why he could not understand it. Why? Because it is nonsense. If it were sense he would have understood it. If Darwin had made God, he would have made him much better than the one that he thought the Bible, directly or indirectly made responsible for all the trouble—or would have to be responsible if He were God, for the trouble, sin, injury, pain, injustice and regime of death that exists in the world. His objective now became clear to him. If the biblical view of God, of man, and of nature is false, as it clearly was in Darwin's estimation then he must dispense with the Bible. So he shut the Bible, turned his back on Paley, and was now prepared to go his own way.

Therefore having freed himself from all restraints of the then orthodox science and orthodox Christianity, he was at liberty to devise a comprehensive explanation of an evolutionary process at work in the natural kingdom whereby it can be shown that all existing living things are the spontaneous products of simpler forms of life. He found a growing confidence in himself. He was sure of his intellectual powers. Had not his peers at the university said, he is clever, he is outstanding? At the age of 30 he became a fellow of the Royal Society. Undoubtedly he was an admirable young man, of tremendous intellectual ability. Out of the turmoil of thought throughout the years 1836 to 1839 came the belief that evolution by natural selection created the natural world as it now is.

So in 1839, that is where he stood. From that time on until 1859, he was amassing evidence and working out the explanation of his theory of evolution. From 1859 until he died in 1882 he was developing it, strengthening it, resisting his critics, and answering those who questioned the validity of the evolutionary process.

The Bible explains Darwin

It is relevant to point out here that Darwin—Charles Darwin—is a classic example of the type of man described by Paul in 1 Corinthians chapter 2. The Authorised Version states: 'the natural man receiveth not the things of the Spirit of God, for they are foolishness to him, neither can he know them, because they are spiritually discerned'. Now Darwin honestly told us how he came to reject the Bible as the source of truth. His self-confessed attitude to God and the Bible has made him a classic demonstration of 'the natural man'. Because he went about it in a natural way, he was unable to perceive the things of the Spirit of God. As he said, they were nonsense, they were 'foolishness' to him. Thereby in disclaiming the Bible, he confirmed it. Charles Darwin in rejecting the scriptures fulfilled the predicted response they declared would inevitably come from such a type of man.

Darwin, Blyth and natural selection

We must observe in passing that Charles Darwin was not the first to discover and define this concept of natural selection. The naturalist Edward Blyth had called attention to this phenomenon in the articles he contributed to the magazine *Natural History* in the years 1835-1837. He described this phenomenon as a process at work in nature whereby, with the passing of time, some living things selectively survive and others perish. He named the effect 'natural selection'. Having carefully observed populations of living organisms from generation to generation, Blyth perceived that a consequence of natural selection is the tendency to conserve the best of existing species, not to change them. This perception stands in direct contrast to the later view of Darwin.

Both Blyth and Darwin recognised natural selection as a highly significant natural process. Both Blyth and Darwin attributed to it a regulatory role in the natural kingdom. But their views, expressed in their appreciation of the history of life on earth, were diametrically opposed. Darwin assumed that living organisms are self-improving, that is they have the capacity to give rise to new and more complicated forms among the old. Blyth on the other hand, interpreting nature as he saw it, perceived it to be capable of preserving the old forms while eliminating the modified defective forms of their descendants. Darwin came to regard nature as progressive, both advancing in quality from good to better to best, and in quantity from few to many new kinds. Blyth saw nature as equipped to preserve the status quo and to counter the tendency to go from bad to worse. Blyth believed in God and His creative powers. Darwin, as far as nature was concerned was an atheist. Blyth accepted the unique creative role of God. Darwin, of necessity, had to find an alternative creative force to account for the natural kingdom. He postulated that nature is self-creating. Thus on the basis of this Darwinian reasoning, a position is reached in which, what by the nature of things the God of the Bible could not have done, a handful of dust, ample air, water and radiant energy have achieved,—a living and a dying world!

It is reported that in due course Blyth accepted Darwin's view of natural selection. As Darwin himself confessed, his view was hypothetical only. In his own words 'I am actually weary of telling people that I do not pretend to adduce direct evidence of one species changing into another'. 'You object to all my illustrations. They are all necessarily conjectural and may be all false; but they are the best I could give'. Which way is nature going? What is really happening to the world?

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THE AUTHOR

Leonard Loose graduated with first class honours in Botany from Leeds University in 1932 and was awarded a Ph.D. in Plant Physiology in 1935. The results of his studies were published in the *Proceedings of the Royal Society* in 1936. There followed two years at the Missionary Training Colony, Upper Norwood, London, before Bible teaching in South India. Returning to England, an urgent call to meet a staff shortage at sixth form level in 1948 took him into grammar school teaching, in due course becoming Head of the Departments of Religious Education and of Science. Since retirement in 1973 he has given much attention to the works of Charles Darwin, developments in genetics, and geology.

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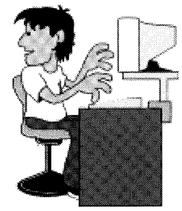

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The illustration on the front cover was provided by Dr. John Peet.

The drawing on the back cover is by Jemma Roberts, aged 8, and shows Adam and Eve working in the Garden of Eden. Adam is feeding the birds and Eve is feeding a monkey.

The photographs of the snakes were provided by Steven Robinson. Clockwise from top left, they are a speckled racer, a yellow anaconda, a radiated rat snake and a red tailed boa. That on page 23 is a mangrove pit viper.

The photographs from 7th ECC and that of Dr. Stuart Burgess are by Paul Garner.

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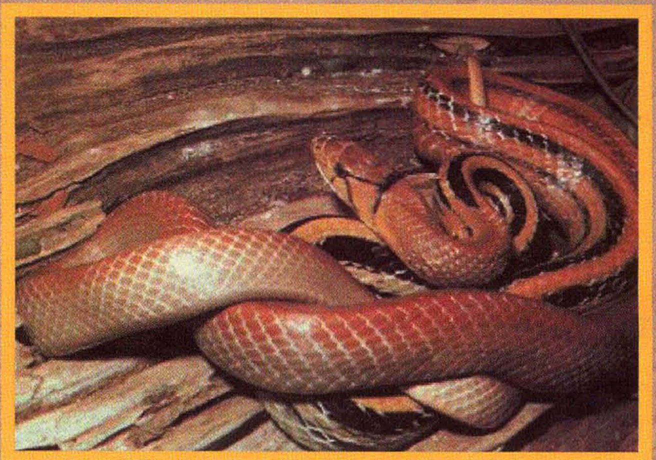

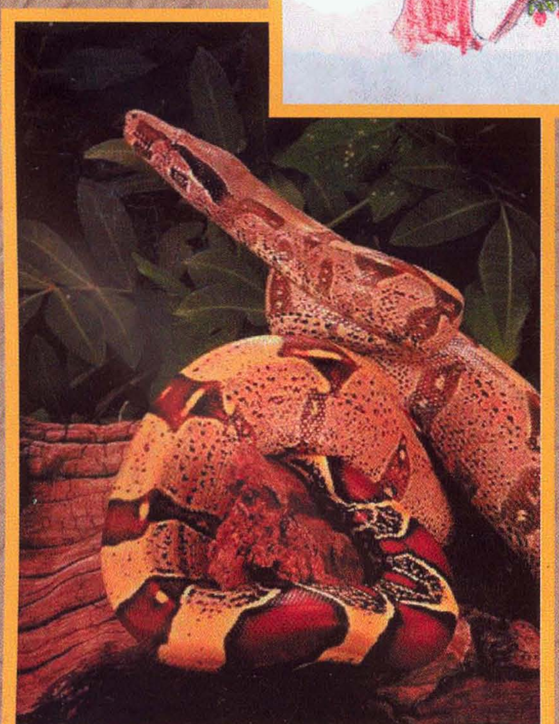

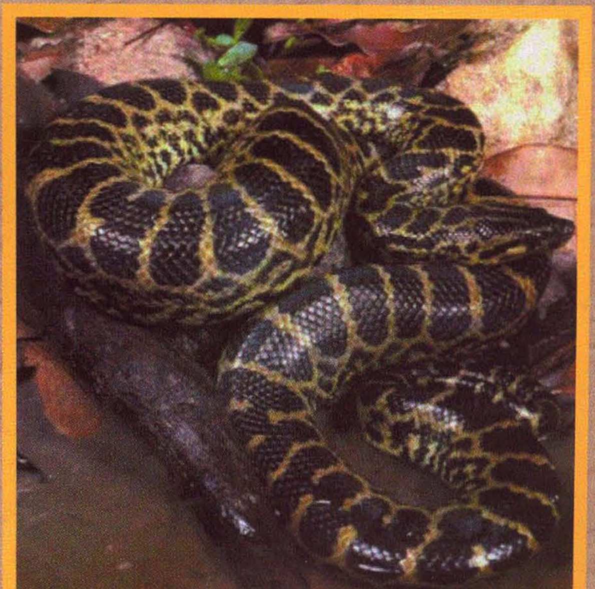

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